

# COAL AGE

The Weekly Journal of the Coal and Coke Industries

Volume 19

NEW YORK, THURSDAY, FEBRUARY 24, 1921

Number 8

## Protection and Politics

THOSE in Congress who have the interests of the coal industry at heart have been asleep on the job. The new emergency tariff bill, said to be at once the pest and pet of stand-pat Republicans, should contain protection for the coal industry. We suggest at least \$5 a ton as the proper tariff on coal imports necessary to put this industry on a parity with field corn and hens' eggs. How anyone could have overlooked this crowning climax to the season's farce is more than we can understand. Maybe the votes of those who mine coal are not among those sought.

## Where Coal Mining is Booming

GERMANY'S obligation under the Spa treaty to supply 2,000,000 tons of coal a month to France, Italy and other European countries requires overtime operation of the Ruhr collieries two days each week. While the coal industry of Germany thus is being run under forced draft, the pits in Great Britain and the mines in the United States are hobbling along on half time. The Economic Council advising the French Government with regard to external trade reports that, in view of the gradual improvement in the home supplies and the large deliveries from Germany under the treaty, France can see her way to dispensing with British and American coal at an early date. It is asserted that the reserves at present are high enough to make France secure against very high prices for at least two years, by which time the domestic output will have increased considerably.

Deliveries to France, Belgium and Italy from the Armistice to October, 1920, are reported as exceeding 13,000,000 tons, and by this time have exceeded 20,000,000 tons of German coal.

Germany is making a great fuss about the burden of the Spa agreement—the tenor of the news from that country is well expressed in our foreign correspondence (*Coal Age*, Feb. 10, p. 279), but if having a market for more than can be produced is hardship, producers here and in Great Britain would willingly take their share today.

The Central Committee of the Miners' International Federation, sitting recently in London, with delegates from France, Belgium, Germany and Czechoslovakia, had a practical discussion of the condition of the industry in the several countries. It is stated that with the single exception of Germany, the reports were of exceedingly gloomy character. Trade depression is general, short time is common, stocks are being accumulated everywhere except in Germany.

Forced on Germany as a part of the reparation program, the Spa agreement on coal deliveries is thus seen to have become a boomerang, maintaining mining activity at a high rate in Germany while business lags

elsewhere. Prosperity follows on production and, in turn, production depends on having an outlet and market for the product. Economists, especially those from this side of the water, have pointed out from the beginning of the peace negotiations the fallacy of endeavoring to make Germany pay the cost of the war by forcing her industry and increasing her exports at the expense of the trade of the Allies.

Recent developments showing the working of such a scheme in the case of coal give point to the theory that the losers in the war can be winners in the end only if compelled by industry and thrift to pay any large portion of the cost of the conflict. France, of course, will pay for the coal that comes from Germany, although no agreement has been reached on the rate. The Germans are reported to expect 50 gold marks per ton (about \$12 at normal exchange).

## Danger of Deferring Payment to Roads

FOR several months the railroads have been short of cash with which to meet current obligations. Some are reported as being in the precarious position of not having sufficient incoming receipts to meet payrolls. Coal has not been paid for to the extent of millions of dollars, and the coal industry is now helping finance the roads, according to one authority, to the tune of a million dollars a day. No question of the validity of the coal bills is involved, merely the lack of cash. This has been true for several months, and it has been estimated that the railroads now owe more than \$120,000,000 for coal. It is asserted that there is no prospect of meeting these bills until Congress authorizes partial payments under the guaranty provision of the Transportation Act of 1920.

The matter of authorizing and directing these payments by the Interstate Commerce Commission has been before Congress for weeks, if not months, but the exigencies of fake "emergency tariff" legislation to win farmer votes has so occupied the time and attention of our national legislators that they have passed up consideration of this essential measure.

There is a limit beyond which the coal industry cannot carry the burden of financing the fuel expenses of the railroads. Banks must next be called upon to carry the load, but the banks are already helping the roads. It was demonstrated during the coal miners' strike of 1919 that the coal industry can "live off its fat" for a long time, when coal by millions of tons was diverted to the four winds and payment deferred for months. Some solution must be reached before the point is reached where the operators supplying railroad fuel become insolvent, unable to meet their payrolls. The next step would be confiscation by the railroads of commercial shipments, for they must have coal to operate. The only practicable solution is to give the railroads the money that is their due.

### An Economic Problem

**I**T IS REFRESHING to turn from a discussion of the coal question by politicians to a statement of "The Fuel Problem," by Arthur D. Little in the *Atlantic Monthly* for February. Dr. Little is a chemical engineer who has gained an international reputation in applying science to industry. Contemplating the situation as regards coal and other national resources into which opportunist development has brought us, he concludes that most of the wastes, delays and difficulties that characterize the situation are due simply to lack of national planning and our failure to recognize the necessity of co-ordination in industry. He says the situation that confronts us now as well as that of last year, is due to the converging influence of many factors. He appraises these factors and save that he stresses labor shortage at the bituminous coal mines—where that is not and has not been a fact—Dr. Little has correctly diagnosed the malady.

It is to his remedies that we therefore turn with interest, not only because of the prestige of the author but because of the character of the reading public reached by his article in the *Atlantic Monthly*. Pointing out "the shocking proportion of the values in our fuel now lost through preventable wastes" he predicts a forced return to coal gas and forecasts an impending revolution in our use of fuel which he thinks will involve not only gas but powdered coal and colloidal fuel. Ultimate electrification of transportation and industry, he believes, is an obvious necessity of the situation, and he cites the concept of the super-power survey as one of the great steps in this direction.

Popular realization of the fact that our coal problem is economical and technologic and not political is helped by such discussion. We would welcome more.

---

### Not New but Better Methods

**C**O-OPERATIVE engineering effort in the study and solution of problems of industry is the big task set for the engineers of this country by Herbert Hoover, president of the American Engineering Council. Waste in production is measured by unemployment, strikes, losses in labor turnover and individual inefficiency, and beyond these, Mr. Hoover pointed out in his address to the council at Syracuse, N. Y., Feb. 14, are poor co-ordination of great industries, failures in transportation, coal and power, and lack of standardization.

Comparing present industrial operation, at from 60 to 70 per cent of capacity, with 1918, when, with 20 per cent of man power withdrawn, production was 20 per cent greater than today, he said that while no one will suppose that it is ever possible to bring national productivity up to full 100 per cent, the whole basis of national progress, of an increased standard of living, of better human relations, indeed, of the advancement of civilization, depends upon continuous improvement in productivity. Elimination of waste, he says, offers a greater field for increasing the standards of living than basic invention.

The great waste of intermittent employment in certain industries, bituminous coal being selected as a striking example—industries now operating on unnecessarily wide seasonal fluctuations—is cited as one of the important questions the engineers are going to study, and Mr. Hoover very properly states that no engineering report is worth the paper it is written

upon without constructive suggestions for remedies. He says that the bituminous-coal industry today is one of our worst functioning industries.

The mines are operating seasonally and erratically. They proceed from gluts to famine, from profiteering to bankruptcy. There is 30 per cent more equipment and men engaged in the production of bituminous coal than would be necessary if it were stabilized to continuous operation. Storage and railway differentials are the two principal directions in which the remedy lies, according to Mr. Hoover, and he contends that through constructive action an army of men can be released from the bituminous-coal industry to convert some luxury into necessity of tomorrow, without any control of prices or profits, but with the producer and consumer of coal placed upon a sounder basis than today. He puts relief for the worker from intermittent employment and unemployment above the interests of the producer and the consumer.

Strikingly Hoover says there is no limit to consumption except the total capacity to produce, provided the surplus of productive power is constantly shifted to new articles from those that have reached the saturation point of demand. He says, for instance, that the productive capacity wasted today is sufficient to improve the housing conditions of our entire people to the level that perhaps only fifty per cent of them enjoy, and at the same time not encroach upon our established necessities. The direct application to the coal industry of this would mean that whereas this industry is carrying about 750,000 men on its payrolls, but could by continuous operation, satisfy the demand with 600,000 men or less, the practical thing to do is to direct the forces of production and distribution so as to eliminate the lost motion and then to depend upon the normal processes of business and human desires to absorb the superfluous labor. Certainly a better program than decreasing the workday from eight to six hours, which is labor's shortsighted but announced solution.

So broad and deep is the thinking of Mr. Hoover, so well laid is the foundation of his plan and so potent is the force of engineering genius he has enlisted in the cause that results are certain.

The coal industry—both bituminous and anthracite, and producers and distributors—must by this time realize that in the public mind there is a coal question, and that question must be answered. There is as much misdirected, loose thinking about coal as there is about the relations of capital and labor. Among the engineers who are called upon to work with the Engineering Council in its study of waste in industry as applied to bituminous coal none is better qualified than the engineers within the industry. Electrical, civil, mechanical and chemical as well as mining engineers, they have no common meeting ground save this new medium except as their work and ideas find expression in their respective individual national engineering societies, where coal is but one of the many subjects considered. It is strictly up to each of these engineers to contribute his ideas.

---

OUR ATTENTION HAS BEEN DIRECTED by Mr. Mack, Comptroller of Weston Dodson & Co., Inc., to the fact that in our issue of Feb. 3, 1921, p. 236, the title on a news item from Washington represented Francis Walker, economist of the Federal Trade Commission as having said that anthracite "profits" are 89c. per ton, whereas Mr. Walker said that the "margin" between the cost and sales realization was that amount.



BATHHOUSE AT MAXWELL MINE OF H. C. FRICK COKE CO.; MOST RECENT OF THE MANY BUILDINGS OF THIS KIND IT HAS CONSTRUCTED

## What H. C. Frick Coke Co's. Experience Shows To Be the Best Type of Bathhouse

Illustrated by Type of Building Erected at Maxwell—Clothes Are Hoisted Into Bottomless Lockerettes Keeping Clothes Apart—Water Kept Thermostatically at 110 Deg. F.—Separation of Rooms Prevents Splashing of Water on Men Dressing—No Locks Used on Clothes Chains

BY D. J. BAKER  
Wilkinsburg, Pa.

FOR the last six years the H. C. Frick Coke Co., a subsidiary of the United States Steel Corporation, has consistently followed out a program leading up to the construction of bathhouses at all its important mines. It has not, however, plunged into the matter headlong, but has proceeded about it in a way that may well serve as a suggestion to other large corporations whose mines are not already equipped with such facilities.

Bathhouses can be designed in a somewhat more methodical way than mining plants. When larger production is needed and a plant has to be built, the engineer must venture a decision based on previous experimentation and long years of thought. Usually he cannot wait until he has tested out some new arrangement or device. He must build the structures at once with the information available. When constructing a bathhouse he frequently may have an opportunity to wait till he has seen the effect of certain changes he has introduced in one of the buildings which at an earlier date his program of construction has called on him to build, and from this earlier structure and its operation he can draw ideas for the next building on the list. This method has been followed by the Frick company.

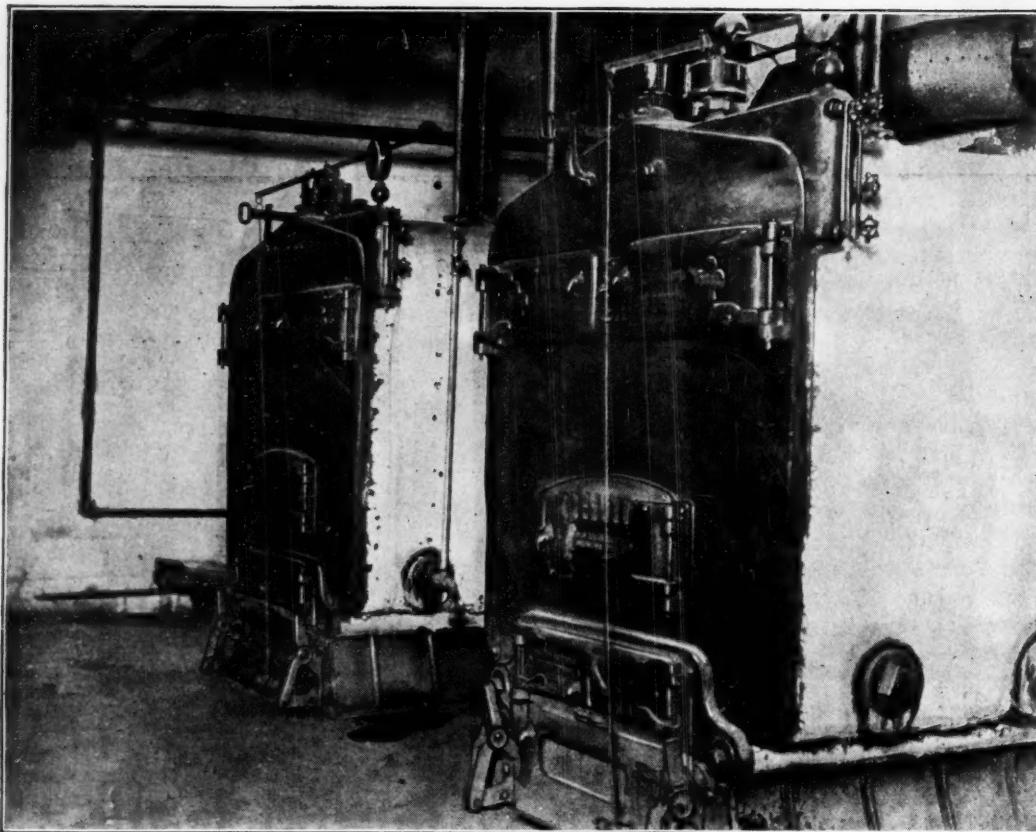
The building of bathhouses is not merely a mechan-

ical problem to be determined solely by known laws of mechanics, physics or machine design. To fit the building to the men demands a knowledge of the employees and their preferences, about which there is less certainty.

Heretofore mine buildings have been constructed primarily to house machinery. In the design of such structures the man who was to operate the equipment was not considered except so far as to assure his safety. Certainly no attempt was made to build the structure around him, as it were. With the bathhouse, however, the design centers around the men themselves. The building and equipment within it must satisfy the needs and wishes of the employees.

As a result of following the rule to build one structure at a time, the progress made from the first to the most recent bathhouse exhibits an interesting series of steps in design and installation. Each succeeding bathhouse constructed was slightly different from its predecessor, and, incidentally, is believed to be better, from the standpoint of both efficiency and economy in construction. The H. C. Frick Coke Co. has perhaps learned more about bathhouse construction and installation than any other western Pennsylvania operator. It has acquired this knowledge solely through experience.

In Pennsylvania the law requires the construction



### Boiler Room

These boilers, which supply steam to heat the hot-water tank, are cross-connected to each other. Steam is not permitted to rise in them to a pressure above 15 lb. per square inch. A double thermostat system is employed to keep the water delivered to the bathhouse down to a temperature of 110 deg. Fahr.

of bathhouses wherever a demand is made for them by any ten men whose work is done in wet places. In some other states the requirement is mandatory that bathhouses be constructed at all mines. Yet in the Pittsburgh district, where the law is thus flexible, some of the best-equipped bathhouses in the bituminous fields are to be found. Possibly the fact that they usually have been erected to satisfy the desire of the operator to provide a real service to his men is a reason why Pennsylvania bathhouses have in many ways a pre-eminence over those in other states. Furthermore, the fact that the initiative in general comes from the operator saves him from the necessity of throwing a building together in a hurry without being able to give its design proper thought. It affords him opportunity to weigh carefully and deliberately the various factors that enter into efficient and economical construction before he goes ahead with his plans.

Certain it is that, whatever may be the reason for the superiority of the bathhouses in the Pittsburgh region, only a bathhouse that will be put to good use will ever avoid being almost a total loss to the company building it. It must be skillfully planned, or the purpose for which it was erected will be defeated.

#### BATHHOUSE LAWS SOMEWHAT LACKING IN DETAIL

In those commonwealths where bathhouses must be erected to satisfy a statute it is not uncommon for some operators to erect and equip a building merely because they are forced to do so. The equipment installed is often not of the best, operation is faulty, and the men in a short time do not care to exercise their bath privilege at all. When this is the case, it would be better if the building had not been constructed.

In the states that require bathhouses at the mines, certain fundamental specifications might well be incorporated in the statutes. It is safe to prophesy that the time is not far distant when Pennsylvania also will

demand the invariable erection of such buildings. At present the progressive companies are erecting them largely without the compulsion which the law makes possible. The operators are quick to realize that all labor controversies are not the direct result of wage scales. Firms that are subsidiary to large corporations and whose mine product is never thrown onto the open market are perhaps more anxious to attract and retain skilled workmen than others without such affiliations. At least this would appear to be the case, judging from the greater variety and amount of community and welfare work undertaken by them.

The small additional expense in producing a ton of coal due to the investment of capital necessary to build a bathhouse, is not a factor of great importance economically. Of far greater value is freedom from labor troubles at the mines and the retention of a large number of contented workmen. All things considered, community and welfare work is economically justifiable, no matter whether the firm that is undertaking the program is a corporation or not. Small concerns that have nothing in the way of inducements to offer the miners will in the future find competition growing keener from day to day, if this is not already the case. It will not be long before every company will be forced to inaugurate a broad program of improvement if it hopes to procure labor.

#### OUTCOME OF SIX YEARS OF EXPERIMENT

At the Maxwell Mine of the H. C. Frick Coke Co., about six miles above Brownsville on the Monongahela Division of the Pennsylvania R.R., a bathhouse recently was completed. This structure ranks with the best to be found anywhere in the state. It is the newest building of its kind constructed by this company and is the final outcome of an extensive series of experiments. It will not long retain its present distinction, however, for this company is proceeding

with the erection of other buildings of the same character. Eventually all its important mines will be similarly equipped.

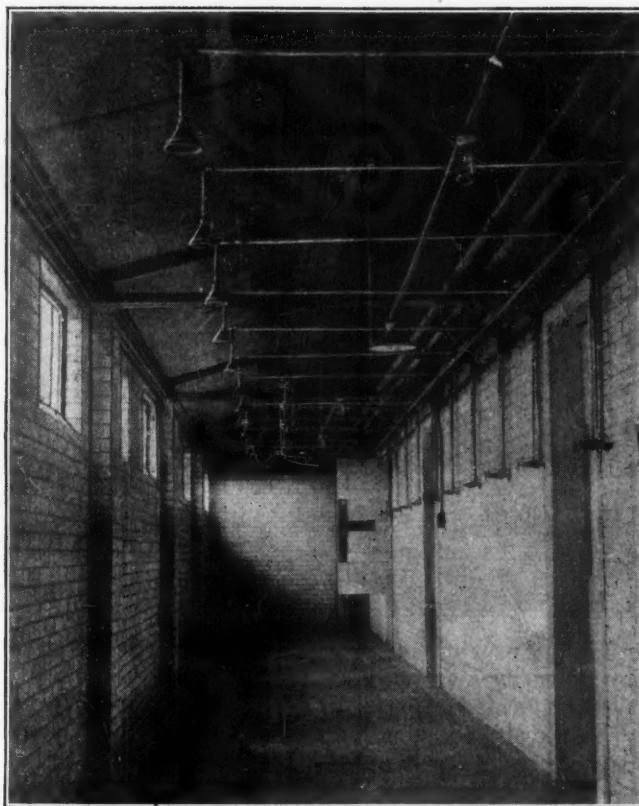
The plans are the result of over six years of study and in a sense have been developed by the men who use the bathhouse. The numerous little "kicks" that have been registered—sometimes apparently over trifles—have not fallen upon deaf ears, but have been noted for later consideration. When objectionable features were discovered they were eliminated in the next bathhouse constructed. Easy and efficient sanitation is the main consideration in the construction and equipment of such a building, and this quality the present bathhouse embodies in a high degree.

The outside dimensions of the building at Maxwell are 66 ft. 6 in. x 42 ft. It rests on 16-in. walls of concrete and is constructed of brick with a slate roof, ventilators being provided at suitable points. The building is a single-story structure with a small basement lying beneath a portion of the locker room. A section of the basement is utilized for storing fuel for the boilers, which are situated in an adjoining room. These latter both heat the building and furnish hot water for the showers and "wash-up" stand.

#### TANK AND SHOWER WATER BOTH REGULATED

In the boiler room, which is 23 ft. 6 in. x 18 ft. in dimensions, two low-pressure Ideal boilers, manufactured by the American Radiator Co., are installed. Each operates on a working steam pressure of 15 lb. and is of sufficient capacity to carry alone the heating and hot-water supply load for the entire building. As a result only one boiler is in active service, the other being held as a spare.

These units are cross-connected, so that steam from either may pass through a single pipe line to the coils in the heating tank, which has a 1,000-gal. capacity. By means of a thermostat on the incoming steam line, the water in the tank is never heated above 180 deg. F.



LOOKING DOWN THE SHOWER ROOM

A brick partition separates the locker room from the showers, so that the men who are dressing will not be inadvertently splashed. This room is separately ventilated from the others, and steam does not pass out of it and into the locker room. A drain runs longitudinally through the floor and the room may be kept sanitary by simply turning a hose on it.

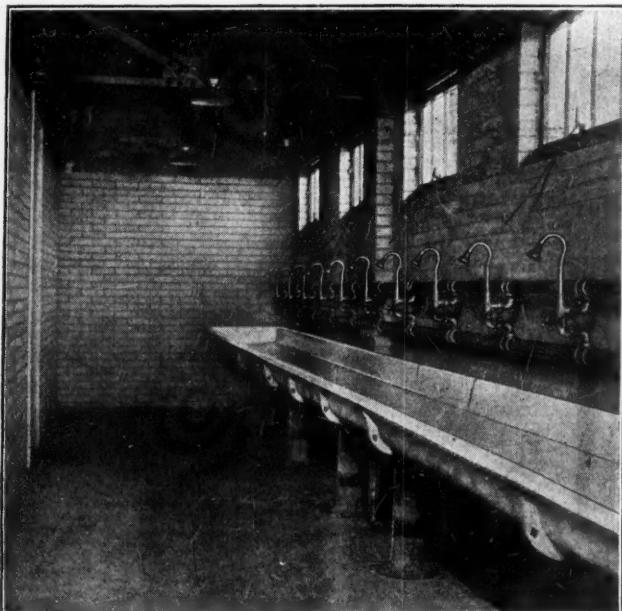
When this temperature is attained the thermostat closes a valve in the line, and steam is shut off from the coils.

An additional safety provision intended to prevent the men from scalding themselves consists of two Powers thermostatic water controllers placed below the tank. The heated water must pass through these before it is available. Here it is reduced in temperature to 110 deg. F. through the action of valves that permit the necessary amount of cold water to enter and mix with the hot. Thus water hotter than 110 deg. F. is not available and the men cannot by any possibility be scalded.

In the main shower room, extending parallel with the long side of the building and separated from the dressing or locker room by a brick partition, nineteen Speakman heavy-weight factory-type compression-valve showers with 4-in. heads are installed. The hot- and cold-water control fixtures are located within easy reach of the bather, so that while it is impossible to procure water at a temperature higher than 110 deg. F., any desired mixture down to cold water can be had.

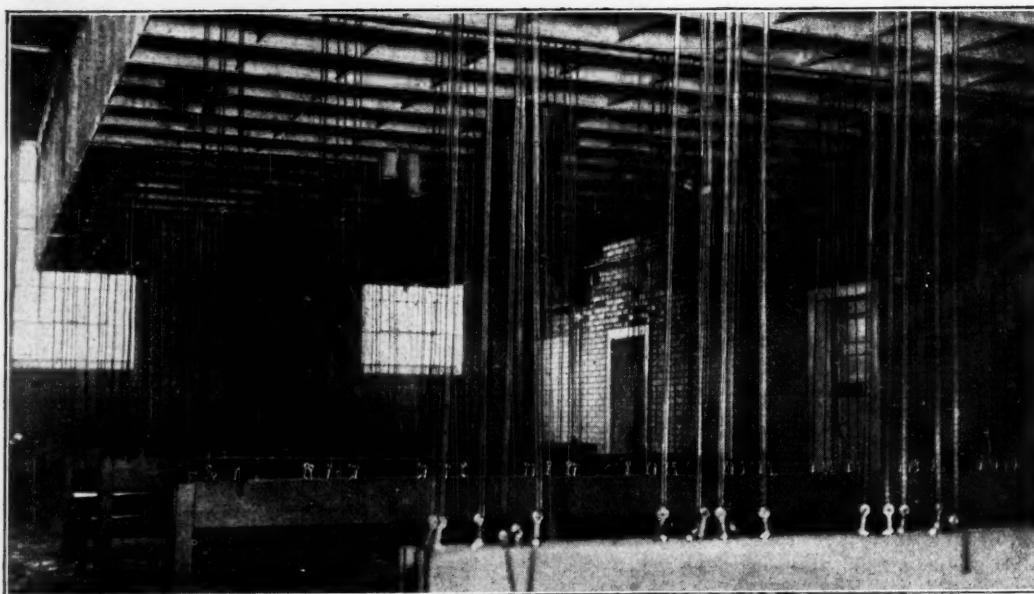
#### STEAM FROM SHOWERS KEPT FROM LOCKER ROOM

The roof of the shower room is fitted with ventilators, and no steam enters the locker room to be absorbed by the miners' clothes. The location of the showers in a separate room is an advantageous detail of the design, as the temperature of this room can be maintained fairly even at all times. Thus, the men, while bathing are not subjected to the sudden blasts of cold air that accompany the entrance into the building of some belated workman. Furthermore, the division of the two rooms by a brick partition makes it impossible for anyone to splash water on the men while dressing.



A SECTION OF THE WASH-UP ROOM

Here men who do not desire complete ablutions may be accommodated. Speakman gooseneck wash-up cocks are used as spigots. The washstand is simply a drain, as running water is used at all times. This is infinitely more sanitary than where separate bowls are provided, and the men prefer this type of stand to the other. Note the extension rods on the windows for raising and lowering the sashes. In the winter the steam is carried out through ventilators in the roof.

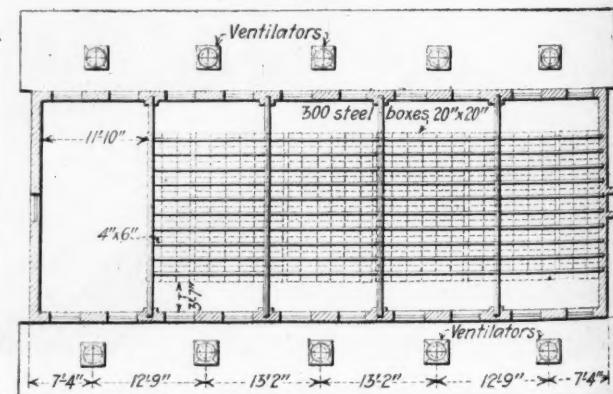
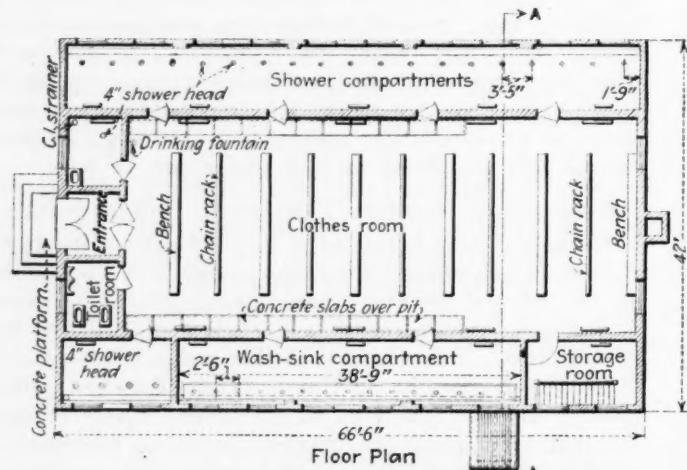
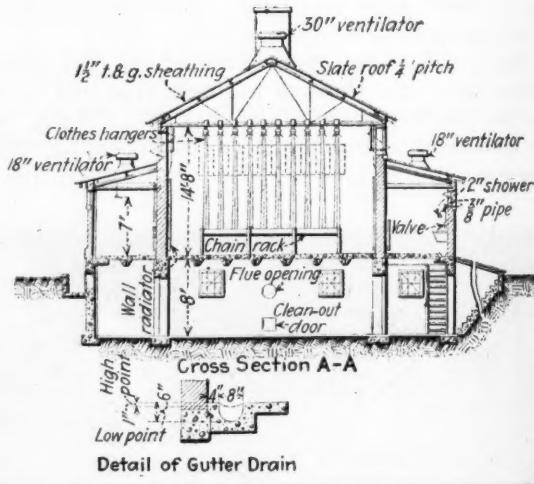
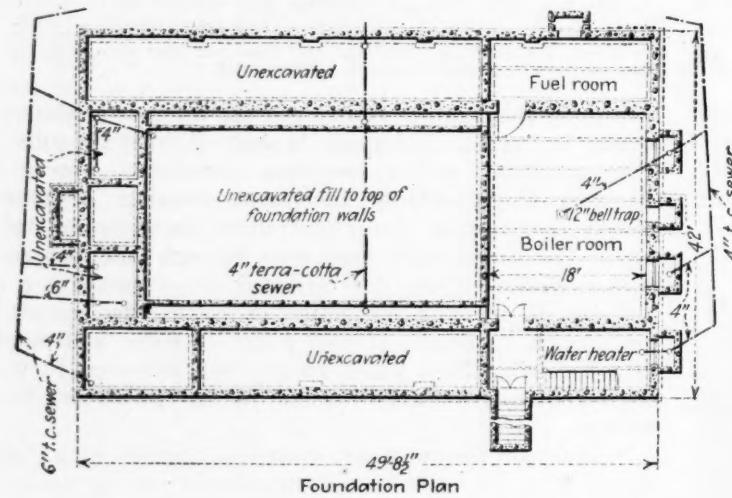


Drains are provided in the concrete floor, and the room may be easily kept clean by simply playing a hose on it. All lighting wires are inclosed in conduits.

On the side of the building opposing the shower compartment there is a similar room measuring 38 ft. x 7 ft. This is utilized as a wash-up room, where those not desiring complete ablutions may be accommodated. A 37-ft. enameled-iron washstand supported

by pedestals is installed in this section. Fifteen Speakman gooseneck wash-up cocks serve as spigots. Swinging doors separate both shower and wash-up rooms from the locker room. This section of the building also is easily kept clean.

The toilet room is in a separate compartment and contains two urinals and two floor-type closets. These are not provided with seats, as the bowls are sunk flush.



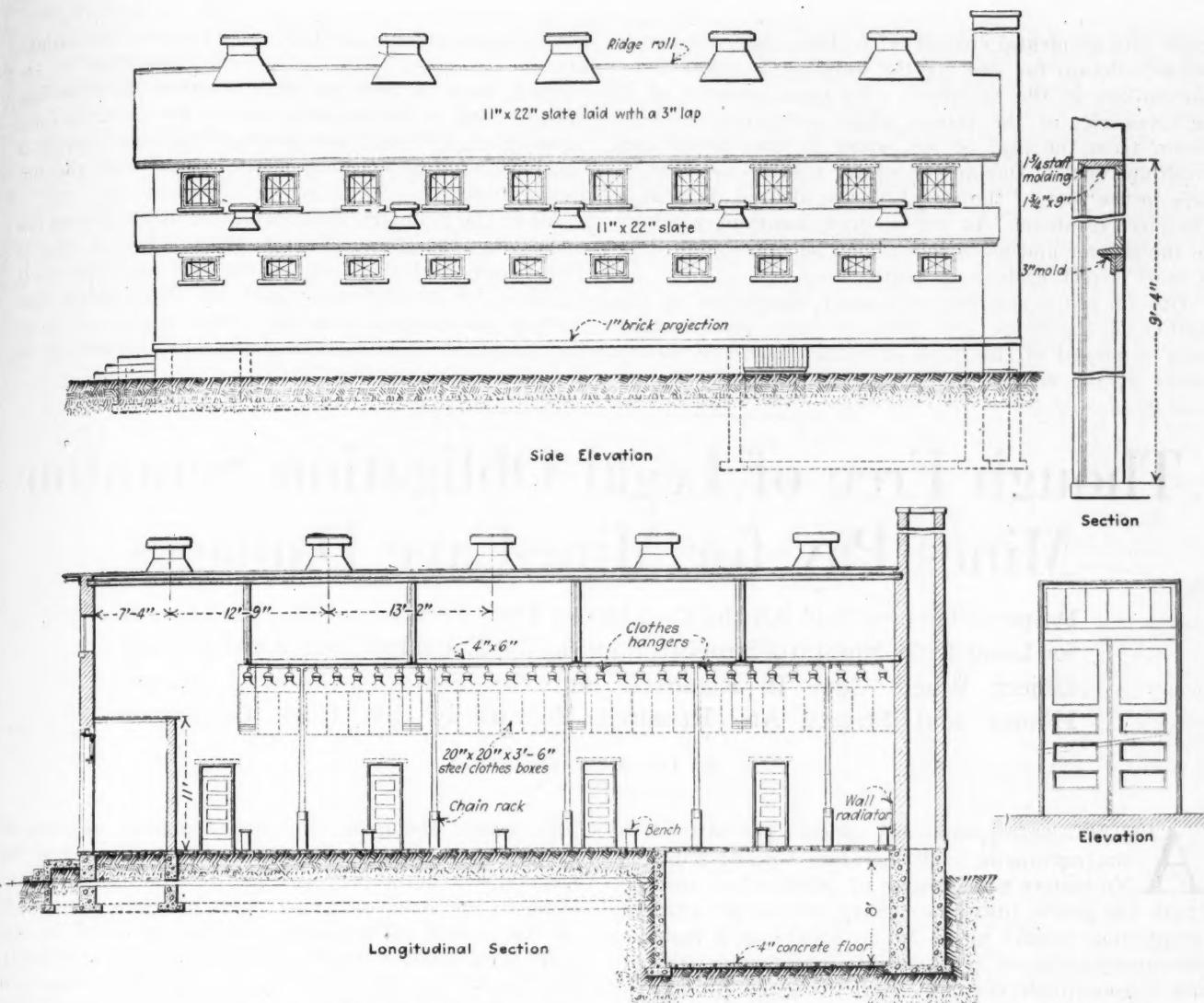
**FOUNDATION, FLOOR AND SQUARE PLAN AND CROSS-SECTION OF BATHHOUSE**

As may be seen, the foundation calls for little excavation, this being confined to the rear end of the building to permit installation of the heating plant. Roof ventilators insure an abundant supply of fresh air at all times.

February 24, 1921

## COAL AGE

353



SIDE ELEVATION AND LONGITUDINAL SECTION OF THE BATHHOUSE

Light is supplied from windows high in the sides. This not only gives excellent illumination, but as the sashes are made to tilt, aids ventilation when desired. A vestibule prevents entrance of cold drafts, which are highly objectionable.

with the floor. Each is flushed by means of a foot pedal. This type of closet is one that adapts itself readily to a mine washhouse, as it may easily be kept in a sanitary condition.

Perhaps the greatest interest centers in the locker rooms, as it is upon the arrangement of this portion of the building that the men register the most complaints. These relate to the methods of suspension of the clothing as well as to the facilities for dressing. Here 330 ceiling-type lockerettes are installed, each of which is suspended from two ceiling pulleys. These lockerettes are nothing more than galvanized-iron baskets made up of a tray and four wire hooks. The tray is used for holding soap and towels and the hooks are employed in suspending the clothing.

The baskets are raised and lowered by copperized sash chain. They are held in suspension by a ring and snap on each chain. The back of each bench forms a tray and is used to hold the surplus chain when the baskets are in suspension. Locks are not provided by the company, as they are not considered essential, although the men are allowed to purchase and use them if they so desire.

A man is permanently detailed as janitor of the building, and he soon familiarizes himself with the faces of the employees and knows the locker compartment of

each. When the building is filled with men he moves among them in a spirit of *camaraderie*, and thus has an opportunity to observe whether each is utilizing only his own individual locker. No thefts have been reported since the building was thrown open for use, and it is not probable that such acts will ever become of common occurrence.

As is shown in the illustrations, each lockerette fits into a separate galvanized iron compartment in the ceiling. Thus, when the baskets are drawn up to their proper height no clothes are visible. These boxlike compartments have been installed for a twofold purpose. In the first place the arrangement is highly sanitary, as no man's clothes can touch those of his neighbor. Secondly, the room is made much more attractive when the ceiling is not bedecked with hanging clothes presenting a riotous profusion of color. A "bubbler" fountain is located in one corner of the room.

This room does not open directly to the outside. A small vestibule must first be entered before access is gained to the inner portion of the building. This is a detail that every bathhouse should possess, as it is inexpensive and perhaps does more than anything else to prevent the men from contracting colds.

The building is heated by wall-type radiators. These are suspended at such a height that the men cannot

come into accidental contact with them and burn themselves. Steam for heating the building is supplied by the boilers in the basement. No great amount of it is necessary, as the rooms might ordinarily be kept warm from the play of hot water in the shower and wash-up rooms. During the winter months the ventilators in the roof of the structure are utilized in ridding the place of steam. In the summer, however, windows in the shower and wash rooms may be raised, affording a more direct system of ventilation.

Out of every six men who avail themselves of the bathhouse facilities—and this includes nearly every man employed at the mine—five take complete shower baths at the end of the day. The men who do not

avail themselves of the full opportunities for bathing are in the main those who, being employed on the surface, have no need for more complete facilities than are provided in the wash-up room. The building has a capacity of 100 men per hour. The water supply is obtained from a filtration plant located near the surface works.

All of the plumbing fixtures in the building were furnished by the Bailey-Farrel Manufacturing Co., of Pittsburgh, and the installation was made by C. O. La Clair, of Uniontown. Both of these firms have actively co-operated with the Frick engineers in the equipment of other similar buildings throughout the Uniontown-Brownsville district.

## Though Free of Legal Obligation Scranton Mines Pay for Mine-Cave Damages

**Property Owners Sold All the Coal Under Their Premises or Accepted Deeds for Land with Right to Support Specifically Excluded, but Emphatically Object When Coal Is Removed and the Surface Caves—Damaged Houses and Streets Are Repaired Voluntarily by Coal Companies**

BY DEVER C. ASHMEAD  
Wilkes-Barre, Pa.

**A**LMOST incomprehensible appears the attitude of the anthracite coal operators toward publicity. No matter what degree of falsehood or shade of truth the public press may print, no matter what the people may believe or be led to believe as a result of the preachments of irresponsible demagogues who are the irreconcilable enemies of all things capitalistic, no matter what sundry organizations, civic or political, may set forth derogatory to the methods of the various coal companies, the operator remains silent and offers neither defense, exculpation nor apology. The statements made, or those that gain credence, may be absolutely false, misleading and unfair, but nevertheless the operator neither affirms nor denies them.

One coal producer with whom I had a talk recently expressed the conviction that it would be useless to deny any of the false statements made concerning the operators, for the reason that people would not believe the denial. This probably would be quite true if the rebuttal were made but once, and then in a half-hearted fashion, but, if the operators employed half the persistence and enthusiasm practiced by the demagogue some beneficial results might be attained.

### CAVING DAMAGES HAVE BEEN OVEREMPHASIZED

The newspapers cannot be held strictly to blame for the position that they take as opposed to the coal companies on the mine-cave question. It is their business to disseminate news, and if they cannot procure testimony from both sides to a controversy they will publish that which is most readily obtainable. On the other hand, the demagogue and various antagonistic coal societies always stand ready to furnish propaganda for the newspapers that may tend to further their own selfish aims.

Scranton, Pa., has become famous for its mine caves and for the damage that these have done to the build-

ings within the city. To read the local newspapers as well as the national illustrated periodicals and the news sheets of other municipalities, one might easily come to the conclusion that one's life is scarcely safe on the streets of Scranton and that it would be still more hazardous to spend a night within the city limits. Such statements and the impressions they foster are, of course, absolutely false, yet the coal companies make no apparent effort to contradict them. What is not emphasized, however, is that the risk is negligible and that the coal companies have a truly excellent organization for the aid and assistance of the property owners as well as for the repair of buildings that have been damaged by the process of coal mining.

In years gone by the owners of real estate in the City of Scranton sold all their rights to the coal under their properties to the companies now operating there. They have thus given the operators every legal right to remove all the coal under their premises. Nevertheless, when a coal company in the exercise of its obvious right and authority removes this coal and the property caves, resulting, we will say, in damage to a house, the owner promptly and loudly complains. He has no legal redress and that he well knows. He is fully cognizant of the facts as to his ownership and knows that he either sold the coal to the operating company himself or that it is specifically stated in his deed that the coal had thus been sold. He, therefore, held or bought his property, as the case may be, with the full knowledge and understanding that at some time it might be affected by mine caves. In spite of all this, however, he vociferously asserts that the coal company is robbing him.

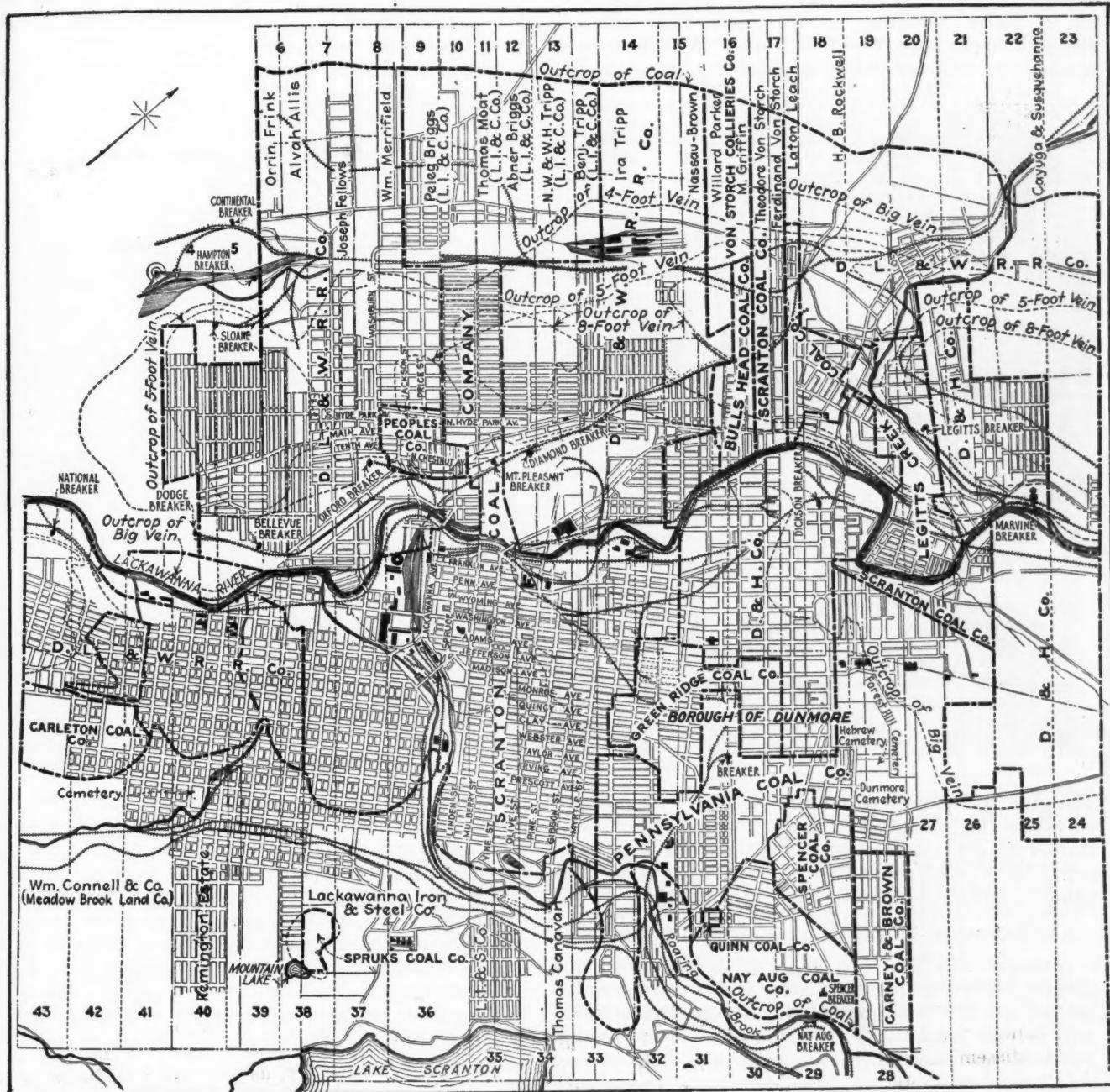
In this section of the Lackawanna Valley the coal beds lie near the surface; as many as six different deposits outcrop within the city limits of Scranton. As these beds lie comparatively level, the cover is neces-

sarily shallow. This means that when second mining is performed the surface will unavoidably be much disturbed.

Scranton owes if not its existence at least its prosperity in large measure to the mining of anthracite. Originally about 400,000,000 tons of this material underlay the city. At the present time there remains approximately 100,000,000 tons. When this coal is removed and placed upon the market it will be worth four times the assessed valuation of all the property within the city limits. The mining companies are now paying their employees approximately \$20,000,000 a year in wages as well as spending several million dollars additional for supplies. One company alone pays about

a quarter of the city budget in taxes, and as this budget for next year amounts to \$1,700,000, it can be seen that the company's taxes are enormous.

The following is a quotation from a brief by W. S. Jenney, general counsel for the Delaware, Lackawanna & Western R.R. Co., before the Commission on Constitutional Amendment and Revision of the State of Pennsylvania: "As illustrating the public attitude toward the coal companies, I beg to submit the following astonishing figures, pertaining to the taxes of our company: In the year 1910 we were assessed in Scranton on \$3,905,300 and paid in city taxes \$66,170. This year [1920] we were assessed on \$11,687,615 and our taxes amount to \$413,623. During this ten-year



CITY OF SCRANTON WITH THE HOLDINGS OF THE COAL COMPANIES

Unfortunately the early settlers in Scranton believed that it was the better plan to live near their work and trade near their homes, and so Scranton was built over some of the best coal beds in the world. Much of the coal excavated in early days did not produce caves, and it was thought that the surface would remain undisturbed forever, regardless of the mining done. In

any event, the price paid for the coal was ample to satisfy the owner even if the land was rendered valueless. Later, when time and second mining caused the old chambers to cave, the owner, who had begun to realize the increase of the value of his surface interest, or the man who had bought from him tried to get the companies to ignore the "waivers of support" and to

pay for the damage, a recompense which the owners of the surface had promised in their deed would never be exacted. With all the *noblesse oblige* which usually goes with great wealth, despite fallacious popular notions to the contrary, the coal companies agreed to rebuild or repair all damaged houses costing under \$5,000, which promise covers 90 per cent of the buildings.

period we have removed 24,000,000 tons of coal from our assessed Scranton properties, and yet we are required to pay over six times as much in taxes as ten years ago."

This gives some conception of the situation in which the operators in the city are placed. In order to obtain the coal remaining, it is practically necessary to cause caves, yet if this coal were abandoned, the City of Scranton would be adversely affected, as its chief industry would cease to exist. A reduction in property values would ensue, and a large number of people would have to leave the municipality.

An investigation was made some time ago as to what type of building within the city was most frequently affected by mine caves. It was found that out of 22,263 buildings in 1912, only 823 were assessed at more than \$6,000 in value. At this time a commission was appointed by Governor Tener to in-

protect all city streets that might be injured through subsidence. As about 90 per cent of the structures within the City of Scranton have an assessed valuation of less than \$5,000 each, it can be readily seen that the dwellings of workingmen and the poorer classes in general are thus amply protected. Arrangement has been made whereby the owners of buildings valued at more than \$5,000 are given an opportunity to purchase sufficient coal under them to amply protect them from mine caves. The rate and terms of payment in these cases are such that the owner is not subjected to any real hardship.

Of course, this agreement does not affect owners of property who have not sold their coal, such property holders having redress through the courts in case the coal on their premises is removed without their knowledge, permission and consent.

The purpose of the Mine Cave Commission is to see



#### A Row of Wrecked Houses

These houses are said to have been undermined by the Peoples Coal Co., and some of the houses are alleged to be over workings that were made in coal the company does not own. In that case the owner can sue in court and recover full damages.



vestigate the subject of mine caves. It recommended only that legislation be passed providing that arbitrators be appointed to settle disputes and that properties be evacuated upon notice that the mining companies contemplate operations under them.

#### COMPANIES REPAIR LOWER-COST BUILDINGS

Although this plan was approved by the press and accepted by the mining companies it did not please the people, and the Scranton Board of Trade tried to obtain further concessions from the mine operators. It succeeded in inducing them to make certain voluntary concessions, and the Scranton Mine Cave Commission was formed, beginning operations on Jan. 1, 1919. The agreement then entered into was signed by all the companies operating within the city except the Hudson Coal Co.

By the terms of this agreement the coal companies bound themselves to restore all properties up to \$5,000 valuation damaged by mine caves and to repair and

to it that the companies live up to their agreement. This body is provided by the operators with funds sufficiently large to enable it to repair damaged buildings should the coal companies refuse to make the repairs. During the first year of the commission's existence it has not been found necessary to draw upon its funds, and these still remain intact. When a piece of property is damaged by a mine cave, the owner may report the occurrence to the commission, which sees to it that property is put back into its original shape as soon as possible. On notification from the commission the coal company over whose workings the cave occurred makes the necessary repairs.

This, of course, does not signify that repairs are made immediately, as in many cases the movement of the surface is not at an end. As soon, however, as mining is completed in the section over which the house stands, the structure is repaired so that in the end its condition is as least as good as ever and often much better. The coal companies endeavor as far as

possible to determine in advance what buildings are most likely to be affected by caves. These are then put upon timbers provided for that express purpose. Of course, it is sometimes impossible to afford this protection, as unexpected caves occur.

As an example of what is being done in the way of mine-cave alleviation, the practice followed by the Delaware, Lackawanna & Western R.R. coal department may be cited. This company has a superintendent who has charge of the "cave department." It is this man's duty to supervise all repair work on the surface and to prevent, as far as possible, any damage to existing structures. Under him are two mining engineers who study conditions below ground and who are, therefore, able to anticipate caves.

Of course, such repairs take time, and this is the chief cause of difficulty. It requires a certain period of time to remove all coal from a given section of any mine, and, of course, no repairs can be made until all movement of the surface has ceased. The coal companies in many instances place houses upon timber supports or mud sills and keep them level during the movement of the cave. Nevertheless, a certain amount of inconvenience is incurred, as it may sometimes require as much as eighteen months before the house can be put back into its original condition.

It is the duty of the commission above referred to see that the coal companies do their work in a proper manner. Inspection of the repairs is made from time to time by the commission or its representatives. This



**After Sixty Years**

Mining has not been done at this point for sixty years. Long after the underground operations ceased a water main was laid. It leaked and flushed sand and gravel through crevices into the mine workings, causing the street to cave.



The outside or repair force consists of two gangs of twelve men each, whose duty it is to raise houses that have been damaged, four gangs of seventeen men each who do nothing but repair masonry, such as foundations, brick walls and the like, likewise four gangs of plasterers consisting of six men each, and four squads of carpenters with an equal number of men. Not only does the coal company put damaged houses back into their original shape, but it also employs six decorators who repaper any damaged walls or ceilings.

Were it not for the inconvenience involved, it would be to the advantage of a house owner possessing a building twenty-five or more years of age to have it damaged by a mine cave, as in that case it would be put back free of charge into excellent shape—far better than before the cave occurred. When such a building is damaged, the company will straighten up the foundation, put in new sills, if this is necessary; renew the plaster, if it is broken, and redecorate the rooms.

body also makes investigations into the conditions existing underground. Other coal companies which operate within the city limits do not have such large repair forces as they do not work over such large areas. The D. L. & W. has to redress about 65 per cent of the damage done within the city, and in the twenty months from July 1, 1918, to Jan. 1, 1920, this company paid out \$350,909.20 for surface repairs.

It has been proposed to make an amendment to the state constitution giving the commonwealth authority to tax coal mines to the amount of 2½ per cent of the value of the coal produced. This would mean that the state would receive from this source each year the sum of \$10,000,000, whereas the actual damage does not amount to more than one-tenth of this figure, and probably in normal years will not exceed \$500,000. Why should the state collect more than ten times as much as is now necessary for the carrying on of this work?

It is extremely doubtful, if the state took over charge

#### Reduced to Tinder

Another view of the buildings shown in the preceding illustration. It is not an unusual practice to buy buildings in this condition for the purpose of profiting by bringing suit for damages against the company by which the undermining was done.

of this work, whether the people would be served any more promptly and satisfactorily than they are today. State governments, whether in Pennsylvania or elsewhere, are notoriously slow in settling anything, and the cost of so doing in most cases is much in excess of what might be the necessary expense to a private individual or corporation.

These remarks bear no relation to two sections of the city. Owing to the action that the city authorities of Scranton took against the People's Coal Co., this firm has been unable for a long time to care adequately for the houses damaged by surface settlements in the territory worked by it. Furthermore, the central business section of the city has not been, nor will it be, disturbed, as the original owners of the coal have set aside a sufficiently large block (that cannot be mined) to support the surface adequately. In making this reservation the property holders have provided that the coal companies may drive headings and airways as well as main haulage roads through the section, so that other portions of the company's property may be reached. But these passages must be kept under the streets and not under buildings.

The illustrations accompanying this article are extremely interesting as they show some of the more spectacular conditions existing in Scranton. Much misinformation has been given out and many false impressions have been conveyed in the non-technical and popular press by just such illustrations as those appearing here. Such misinformation is largely the result of the companies' policy of "sitting tight" and saying nothing.

As an example of the activities and propaganda now being used against the coal companies operating within the City of Scranton it may be said that an association has been formed for the ostensible purpose of combating the mine-cave evil. This organization professes to "straighten out mine-cave matters." When a member of this association suffers from a mine cave, the officials of the organization report the matter to the Scranton Mine Cave Commission, which takes it up in the usual routine way, repairs being made in the manner above described. The association thus obtains all credit for repairing the man's house, whereas the same result would have been achieved in any case. In

other words, this association is believed to be, in the last analysis, merely a scheme to enhance the political prestige of its officials.

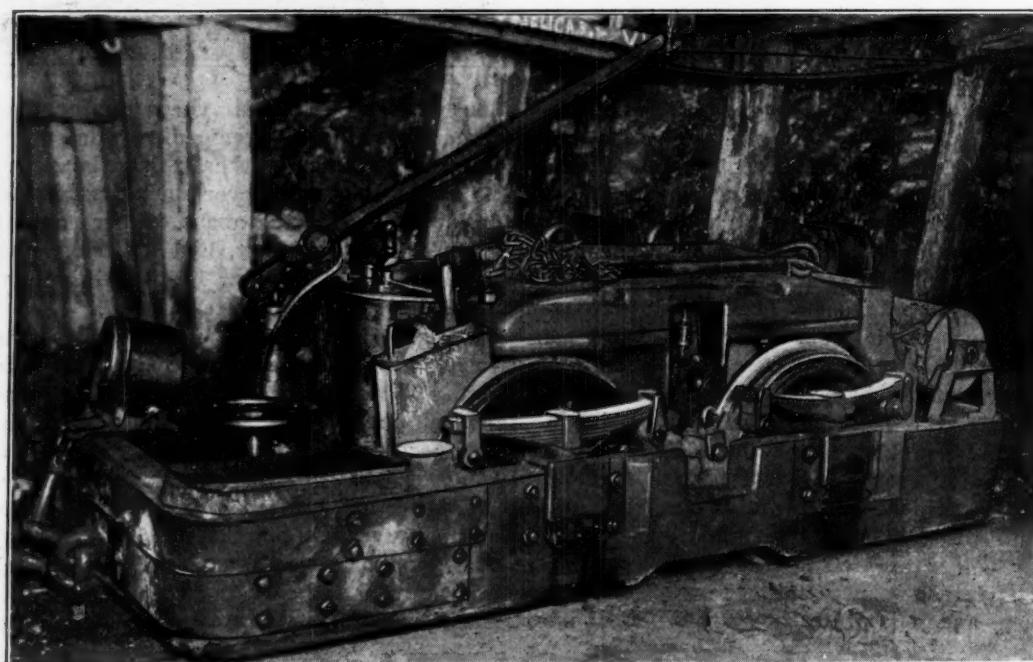
### Locomotive in Rock Springs, Wyo., Has Seen 27 Years of Active Service

**A**N ELECTRIC mine locomotive that has remarkable record for length of service is at present operating in a mine of the Union Pacific Coal Co. at Rock Springs, Wyo. This locomotive was built by the Thompson-Houston Co. and was put into service in its present location twenty-seven years ago. It has been giving continuous service ever since, records kept by the Union Pacific Coal Co. showing that it has hauled 3,712,500 tons of coal over an average distance of 1.5 miles, making a total of 5,568,750 ton-miles.

This locomotive is a type GLM-30-6 terrapin back machine built for 500 volts and having a speed of eight miles per hour. It has a draw-bar pull of 3,000 lb. and the wheels are 28 in. in diameter.

The locomotive is equipped with one motor having a single-field coil and the old Gramme-ring armature. The original field coil is still in service and has never given any trouble. Two armatures have been used, one the original furnished when the locomotive was purchased, and the other a spare. The commutator is much smaller than those used at the present time for 500-volt circuits, and five have been worn out in service. The original control was of the semi-circular disk type, which has since been abandoned. The original brake rigging is still in service. The gears also have had long life, as only three sets have been worn out.

This locomotive also holds the low record in the mines of this company for repair charges, and consequently in cost per ton of coal hauled. In fact it is held to be just as efficient in operation as any of the recently-designed locomotives operated by this company. The feature that is held largely responsible for the low upkeep is the use of the semi-elliptical leaf-spring construction. It is interesting to note in this connection that the General Electric Co. has returned to this design in its trolley locomotives, with the addition of an equalizer bar to distribute the weight evenly.



27-Year Old Locomotive

This machine has moved over 5½ million ton miles and is still in excellent shape. Of course certain parts, such as commutators, gearing, brake shoes and the like, have required renewal, but the main parts of the machine are those originally supplied.



ENTRY DRIVER PROVIDED WITH PIPES FOR PNEUMATIC DISPOSAL OF THE DISLODGED COAL

## Mining Machine for Rapid Heading Driving Which Cuts, Dislodges and Loads Coal

Drives a Heading Full Height and Width at the Rate of 66 Ft. Per Day of Less Than Ten Hours—Certain Slight Changes in Detail and a New Method of Car Supply Will Permit Even This Record To Be Improved

MOST mining machines replace only one of the many hand-mining operations, namely, that of undercutting, while others perform three—cutting the coal, bringing it down and loading it out. This latter combination is an ideal that mining men have long sought.

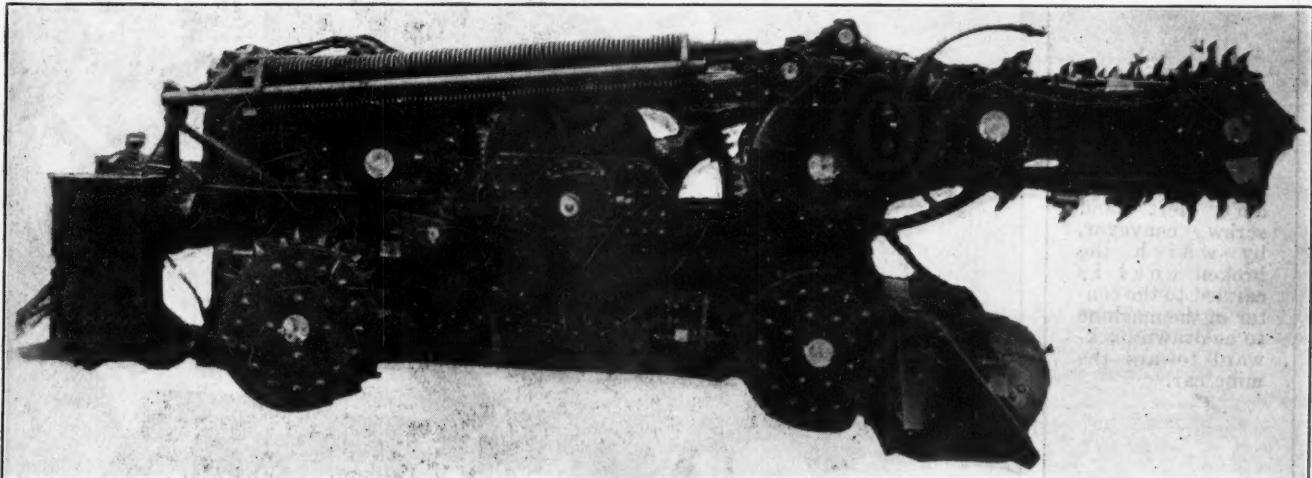
To this latter type of mining machines the one developed by Colonel Edward O'Toole of Gary, W. Va., and covered by U. S. patent No. 1,143,897, belongs. The present device has been developed as the result of numerous experiments with machines of the same general type. It is designed especially for use in mines producing coal for coking, in which case it is neither necessary nor desirable to obtain large lumps.

The machine consists of a motor-propelled truck, an oscillating chain-driven revolving head carrying cutter bits and a scraper conveyor for loading the coal from the face into mine cars at the rear of the machine. The head, which swings or oscillates up and down across the working face, consists of a chain-driven steel shaft on which are mounted a number of arms carrying bits. These arms are staggered along the shaft and each bit is about 30 deg. from those upon either side. The head is driven by chains and sprockets through gear and pinion from a 75-hp. motor. The movement of the bits is, of course, rotary about the

head shaft, while the entire head is oscillated by means of heavy eccentrics on a drive or countershaft.

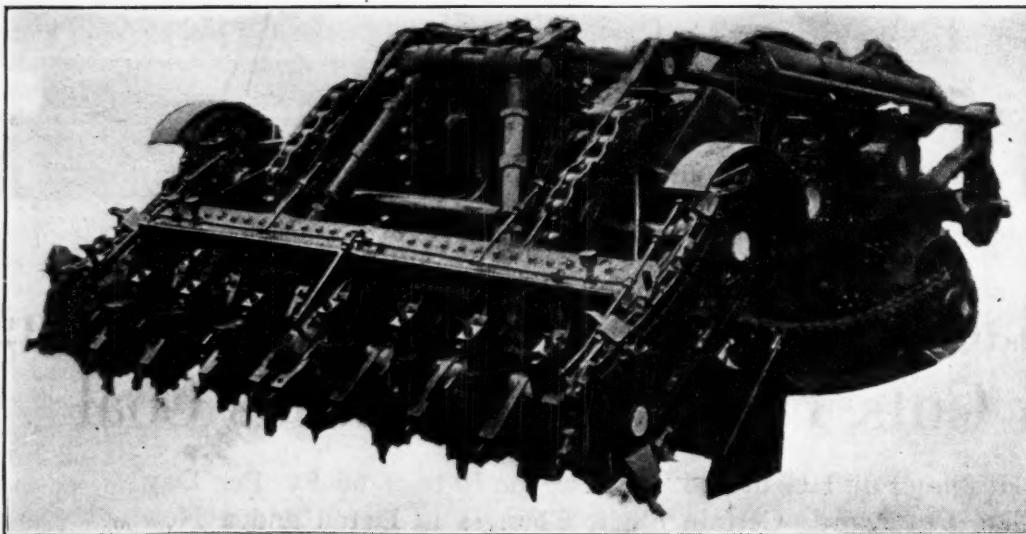
As coal is cut from the face, it falls to the floor, where it is moved to the center of the machine by means of two short screw conveyors, where it is scooped into a scraper conveyor that moves it backward over the top of the machine and deposits it in a mine car at the rear. The stress and shock of the cutter head are relieved by heavy triple reciprocating springs mounted upon either side of the machine. All parts are of sturdy and massive construction, and the machine itself as a whole is heavy so as to withstand the hard work it is designed to accomplish. Each part is, however, easily accessible for inspection or repair in case of wear or breakdown.

A daily record of this machine, being the average of several days' operation, is as follows: Distance advanced, 38 ft.; power consumption, 164 kw.; tons mined, 89; average time of operation, 6 hr. 40 min. The tests herein averaged were conducted simultaneously with experiments on exhausting coal from the mine by means of an air blast. A Root blower was connected to a large spiral-riveted pipe and operated exhausting. This pipe extended for several hundred feet into the mine and was connected with the mining machine. An attempt was thus made to draw the coal



SIDE VIEW OF THE MINING MACHINE SHOWING HOW COMPACTLY THE UNIT IS BUILT

Here may be seen the springs which cushion the movement of the oscillating head, the cutting bits and the screw conveyor. The spikes on the wheels are provided to feed the machine forward.



**With  
Lowered  
Cutter Head**

Note the many separate cutting arms which cut the face of the coal by revolving and oscillating vertically and not, as is usual, with cutter chains by moving horizontally.

out of the mine and into a tank over the railroad track. This attempt was highly successfully in so far as coal removal was concerned, but in its passage through the pipe the material was reduced to dust. Although this condition was not disadvantageous, as far as immediate coking was concerned, the coal obtained could not be shipped long distances in open-top cars.

Because readings were being taken at the time that the experiment was being conducted, the results obtained are not a true indication of what the machine can do. One instance of this kind is the record for one day in which 154 tons were mined in 9 hr. and 47 min., and the advance was 66 ft., the average consump-

tion being 120 kw. The passage driven was in all cases approximately 10 ft. wide and 7 ft. high.

It is the present intention to fit this machine with a caterpillar truck and make certain minor changes in the details of construction. A new method of handling mine cars will then be tried, as car supply is the great problem in successfully operating loading machines.

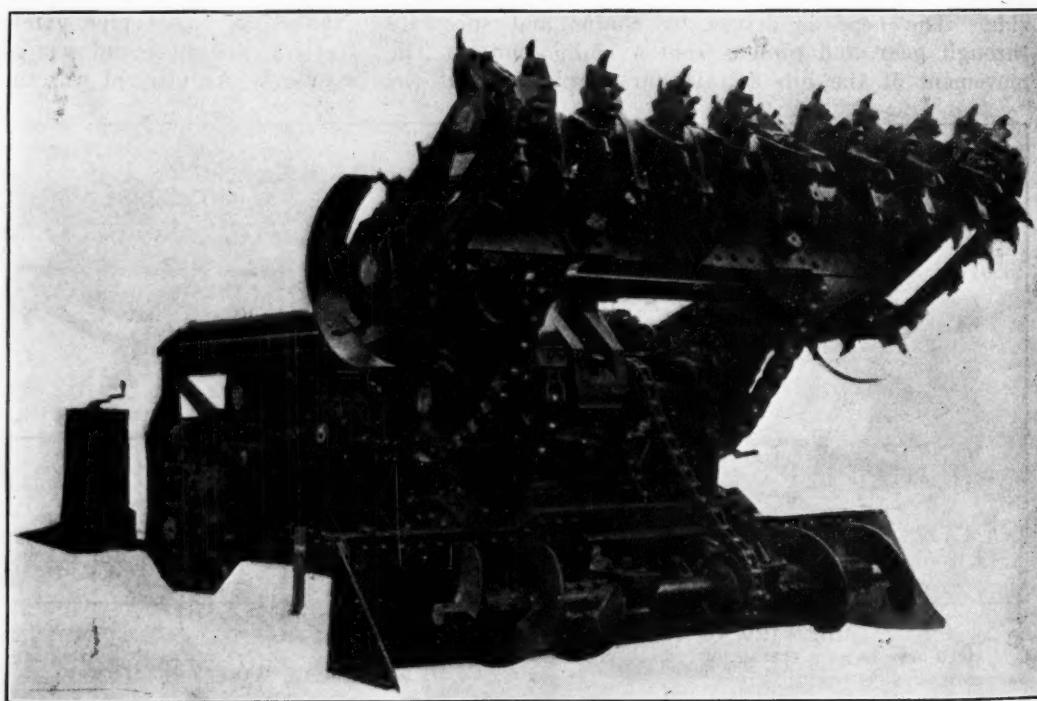
A table showing some of the work performed by this machine, the time consumed and the cost is presented herewith. These figures are now six years old and would have to be recalculated, using a new basic rate, in order to bring them up to date and render them comparable with present conditions and prices.

OPERATION OF O'TOOLE MINING MACHINE, SHOWING WORK DONE AND COST

Month	No. Days Worked	Feet Cut	Tons Mined	Labor Expense				Misc.	Total
				Operation and Repairs	Bits	Pipe	Rash		
June.....	15	384.77	872.8	\$218.10	\$16.10	\$174.42	\$60.90	\$23.20	\$492.72
July 1-15.....	7	264.23	613.2	80.58	4.16	53.84	106.00	10.55	255.13
July 16-31.....	11	402.07	924.8	102.00	9.59	91.35	120.55	38.53	362.02
Aug. 1-15.....	8	283.91	845.0	90.93	5.64	100.01	36.04	41.01	273.63
Aug. 16-31.....	11	518.03	1,301.0	85.44	22.20	113.47	37.94	27.94	286.99
Sept. 1-15.....	13	394.67		139.20	18.56	123.55	51.72	14.90	347.93
Sept. 16-30.....	13	216.54	1,216.2	{ 97.51	8.99	88.89	48.56	21.47	265.42
Oct. 1-15.....	4	67.02	221.7	67.83	2.83	27.03	6.58	121.08	225.35
Oct. 16-31.....	7	135.13	217.9	45.17	7.90	12.93	9.56	9.05	84.61
Nov. 1-17.....	5	191.67	601.0	55.65	9.04	24.45	10.60	4.65	104.39
Totals.....	94	2,858.04	6,813.6	\$982.41	\$105.01	\$809.94	\$488.45	\$312.38	\$2,698.19
Per ton mined.....				\$0.1441	\$0.0154	\$0.1189	\$0.0717	\$0.0459	\$0.3960
Per day worked.....				30.40	72.5				

**With Raised  
Cutter Head**

Note the right- and left-hand screw conveyor, by which the broken coal is carried to the center of the machine to be drawn backward toward the mine car.



# A Quarter Century of Mine-Car Evolution

New Car Still 42-In. Gage but Almost Twice as Capacious and Nearly 25 Per Cent Lower—Has Outside Journal Boxes, Wheel Housings, Spring Drawheads and No Endgate—Car Is Part Wood and Part Steel

**T**HE accompanying illustrations show the progress made in a quarter century of mine-car design. Both cars were designed by the same engineer—Carl Scholz. This makes a comparison of the two doubly interesting. In both cases also the track gage is the same, being 42 in.

In the older car it may be observed that the wheelbase is 27 in., the wheel is 18 in. in diameter, the length inside the box is 7 ft. 6 in. and over all 8 ft. 11 in. The height of box above the rail is 3 ft. 3 in. and the height over all is 4 ft. The over-all width is 5 ft.  $\frac{1}{2}$  in. The estimated capacity of the car box level full is about 60 $\frac{1}{2}$  cu.ft.

#### IS A FOOT LOWER BUT TAKES TWICE THE LOAD

The new car has a 16-in. wheel instead of one of 18 in., and a 38-in. wheelbase instead of one of 27 in. The length over all is 12 ft. as opposed to a little under 9 ft., and the width over all 6 ft. 3 in. instead of a trifle over 5 ft. The inside dimensions of the car box are as follows: Length, 10 ft.; width, 6 ft.; depth, 2 ft. Allowing 1 $\frac{1}{2}$  cu.ft. for the wheel- and draw-bar spring covers this gives a net cubical content, level full, of 118 $\frac{1}{2}$  cu.ft. The height over all is 3 ft. 1 $\frac{1}{4}$  in. It will be noted how much lower the newer and larger car is. It is becoming recognized that a high car causes coal breakage and a considerable waste of muscular energy.

Perhaps the most striking difference between the two cars lies in what might be termed fundamental details. The older car is of a type familiar to all mining men—a wooden car with a flared box, belted and strapped with iron. It was built for end dumping, and the endgate, which, it will be observed, is higher than

the car side, was arranged to lift as the car tilted. The new car, built of structural shapes and oak planks, is of solid-body design, usually discharged by means of a rotary dump.

Whereas the old car has solid inside journal boxes, the new car has roller-bearing outside journal boxes, also one tight and one loose wheel. Allowing the car bottom to extend out sidewise beyond the wheels increases the capacity of the car and keeps both its height and center of gravity low. Even on cars built for end dumping the wheel housings within the car box need not interfere with the discharge of the contents.

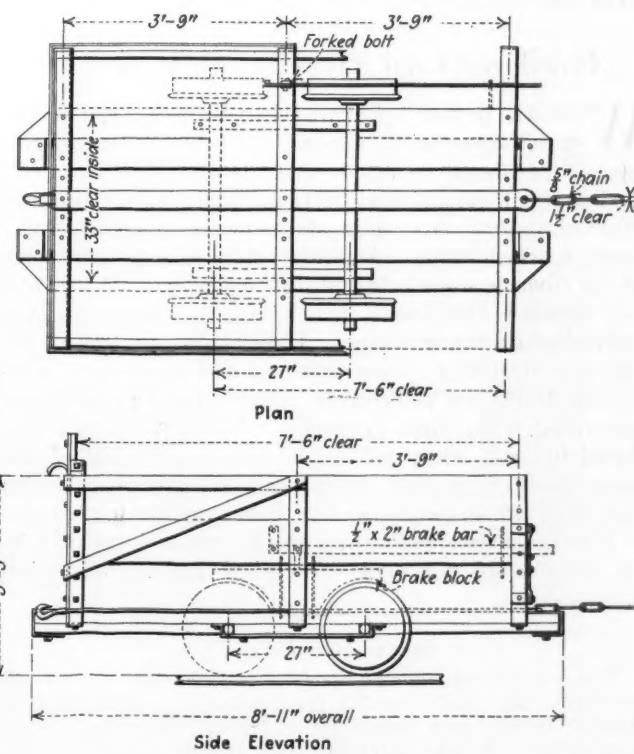
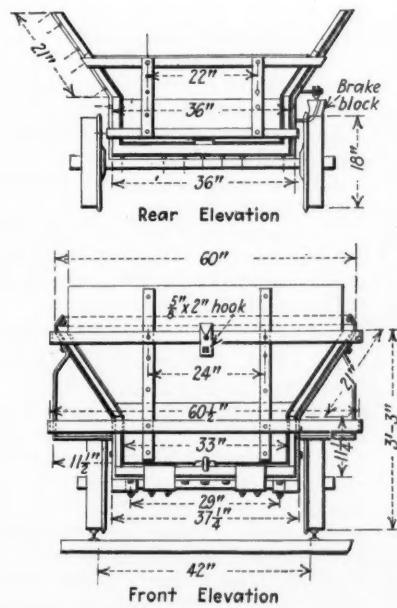
As will be noticed, the draft mechanism is provided with a spring drawhead at one end. Every mining man is familiar with the jerking of a trip of cars when the locomotive attached to them makes a start. This not only subjects the couplings to a decided shock, which when often repeated tends to crystallize the metal, but jerks and shakes coal from the top of the cars upon the track. Putting a spring or springs in the line of pull markedly lessens the jerk imposed upon both the couplings and the contents of the cars.

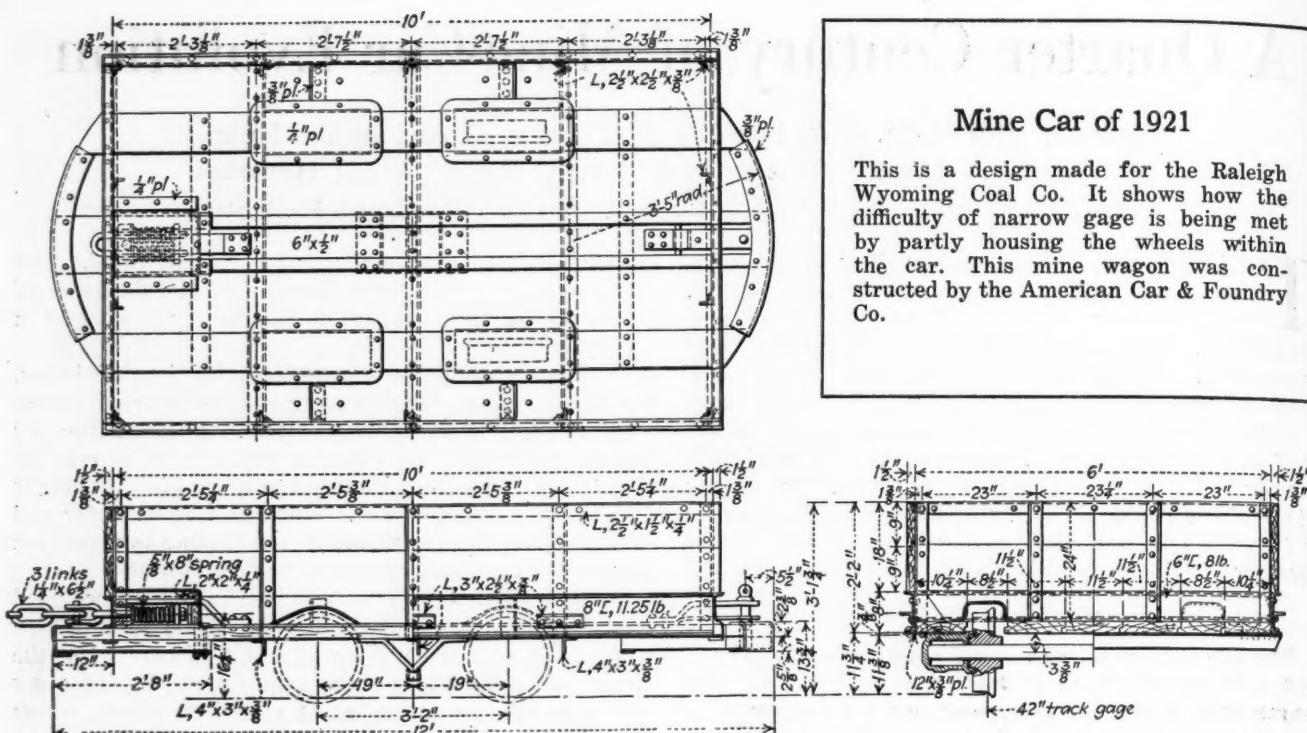
#### MODELING CARS AFTER RAILROAD PRACTICE

Gradually the mines are adopting, and adapting, the details of construction that have made our modern railroads possible. The day probably is not far distant when spring-suspended journals will be common practice. Self-acting or automatic couplings doubtless would be advantageous, but the chief difficulty encountered in their adoption is the sharp curves around which the cars must be moved. This problem so far has not been solved.

#### Mine Car of 1895

This car was designed for the mine of the Thomas Scholz Coal Co., Monmouth, W. Va. The capacity is limited strictly by the gage except in so far as the flare of the car makes it possible to widen the load at the top and in the overtopping. The draftsman has made the endgate fit quite neatly. If it was usually as tight as in the drawing here shown the demand for the solid car would be less pressing.





The new car is of what is termed composite construction—that is, a portion of the box is made up of channel iron, while the remainder is of planking. Opinions differ somewhat among operators concerning the advisability of using steel cars instead of wooden ones. Both types of construction possess obvious advantages. The chief objections to all-steel cars are their rigidity and liability to take a permanent "set" if once strained out of shape. The wooden car, on the other hand, appears to be much more flexible, and will give, or "work," to compensate for unevenness in the track. It admits also of easy repair after accident. The composite car possibly does not embody all of the advantages of either the all-wood or all-steel construction but doubtless shares in large measure the good qualities of both.

### Powdered Coal Saves Stand-By Losses

WHERE proper apparatus and methods are introduced noteworthy economies can be effected by the use of powdered fuel. Losses during short periods during which steam pressure is not required are reduced to a minimum. No air is allowed to pass through the furnace when firing operations stop, the radiant heat of the furnace walls being absorbed by the boiler. Thus are avoided the losses which occur when fires are banked on grates or stokers. Under those circumstances fuel is constantly being burned, and losses are sustained from the incomplete combustion of the gases generated. The time necessary to get up steam is reduced by half when pulverized coal is substituted for lump fuel of similar character. Recent experiments also show an economy in fuel consumption by the use of powdered coal which in some instances is said to be as high as 30 per cent.—*Chemical and Metallurgical Engineering*.

### COAL AGE INDEX

The indexes to Coal Age are furnished free to all who ask for them. The index for the last half of 1920 is now ready for distribution, and a copy can be had by addressing a post-card to the Subscription Department of Coal Age.

### Mine Car of 1921

This is a design made for the Raleigh Wyoming Coal Co. It shows how the difficulty of narrow gage is being met by partly housing the wheels within the car. This mine wagon was constructed by the American Car & Foundry Co.

### Howat, Freed, Calls Strike, Is Arrested and Imprisoned for Contempt

ONE of the first acts of Alexander Howat, president of the United Mine workers of America in Kansas, on being freed from incarceration was to order a strike. It was agreed after a meeting of the joint board of operators and mine workers about two years back that Karl Mismash was to have a certain wage on reaching the age of nineteen. The Mismashes have presented a record in the family Bible that Karl is of that age. The operators assert, however, that there are two entries in that book, one of which shows that Karl Mismash is not yet nineteen years old.

On this weak basis for a dispute Howat called out the mine workers at two mines, in violation of the Kansas laws. Presiding Judge W. L. Higgins of the Court of Industrial Relations immediately ordered the arrest of Howat, the order being dated Feb. 5. This strike is the first officially ordered since the passage of the Industrial Relations Law of Kansas. Howat was arrested Feb. 7.

On Feb. 16 he was found guilty of contempt of court and sentenced to a year in jail by Judge Andrew J. Curran of the Crawford County District Court.

With Howat were found guilty his five co-defendants in the contempt proceedings, all officers of the Kansas union. They are August Dorchy, vice president; Willard Titus, John Fleming, James McIlwrath and Earl Maxwell, executive board members.

All the defendants were sentenced to a year in jail and to pay costs.

Howat was released on bail pending a hearing for appeal. He still faces prosecution, however, on a criminal charge for calling a strike in violation of the Kansas industrial law, referred to above.

DR. G. H. ASHLEY, STATE GEOLOGIST, says that originally Pennsylvania had 21,000,000,000 tons of anthracite. Of this about 6,000,000,000 tons have been mined or made unminable. At the present rate of mining—about 80,000,000 tons a year and 20,000,000 tons going into the classification of lost coal—the deposits are good for 150 years. The gas coal of the Greensburg and Uniontown basins will last twenty-five years more, at the present rate of exhaustion, and the Pittsburgh Bed will be gone in eighty years. The state's original bituminous content was 112,500,000,000 tons, of which 106,500,000,000 tons remains available.

## Obstacles to Return of Pre-War Mining Costs

As Labor Accounts for 70-80 Per Cent of Coal-Production Expense, Existing Wage Scales Are Almost Insuperable Barrier—Strategic Advantage with Workmen—Greatly Increased Demand Necessary to Encourage Production

BY DAVID L. WING  
Washington, D. C.

**C**HIEF among the factors which cause changes in the costs of a given mine are the changes in the wage scale, and in the tonnage produced. The labor cost per ton forms generally between 70 and 80 per cent of the total f.o.b. mine cost. In the seventy-three mining districts for which detailed statistics for 1918 were published in the Federal Trade Commission series of bituminous coal cost reports the distribution was as follows:

Per Cent of f.o.b. Mine Cost that Goes to Labor	Number of Districts	1918 Production, Tons	Per Cent Total Tonnage
60-64	1	247,000	
65-69	10	175,880,000	35
70-74	33	158,877,000	32
75-79	18	129,913,000	26
80-84	11	32,502,000	7
Totals.....	73	497,419,000	100

It will be noted that the differences between the labor cost proportions from district to district are much less than between the total costs themselves, which, excluding lignite, ranged from \$1.62 per ton in a West Virginia field to \$4.45 in an Arkansas field.

The principal reasons for the differences of cost from field to field are the physical conditions under which mining must be carried on, chief of which are thickness of seam and the extent of the use of modern machinery for mining and transporting coal to the mouth of the mine, instead of old-fashioned pick mining and mule haulage. It is a mistake, however, to try to measure the advantage that one district has over another by a direct comparison of their respective labor or even total f.o.b. mine costs. Allowance must be made for the much heavier investment necessary in the fields where machinery is used to cut down human labor for mining and transporting the coal.

Nor does it necessarily follow in a given field that the thicker the seam, the lower will be either the labor cost or the total f.o.b. mine cost per ton. The analyses of cost by thickness of seam mined shown in the Federal Trade Commission reports indicate that after a certain thickness of seam is reached—in most districts between five and six

feet—the mining of thicker seams involves higher costs. In other words, both labor and total f.o.b. mine costs per ton in a given field are likely to decrease as the thickness of seam increases from two feet up to between five and six feet, and then to rise as the thickness increases still further. Apparently in such cases it is the greater amount of labor and supplies required in timbering the thicker seams which increases the costs.

Wage scales for each field are fixed with relation to the particular mining conditions of the field. Common or uniform increases in the existing wage scales, however, have widely different results in their effect on the per-ton labor costs of the different fields. Thus it was that the wage increase granted November, 1917, for which a uniform price increase of 45c. per ton was allowed, increased the cost about 28c. per ton in the Illinois mines of F. S. Peabody, according to his testimony before Senator Reed's committee. On the other hand, it has been found that this wage increase in some other fields increased the labor cost as much as 70c. per ton.

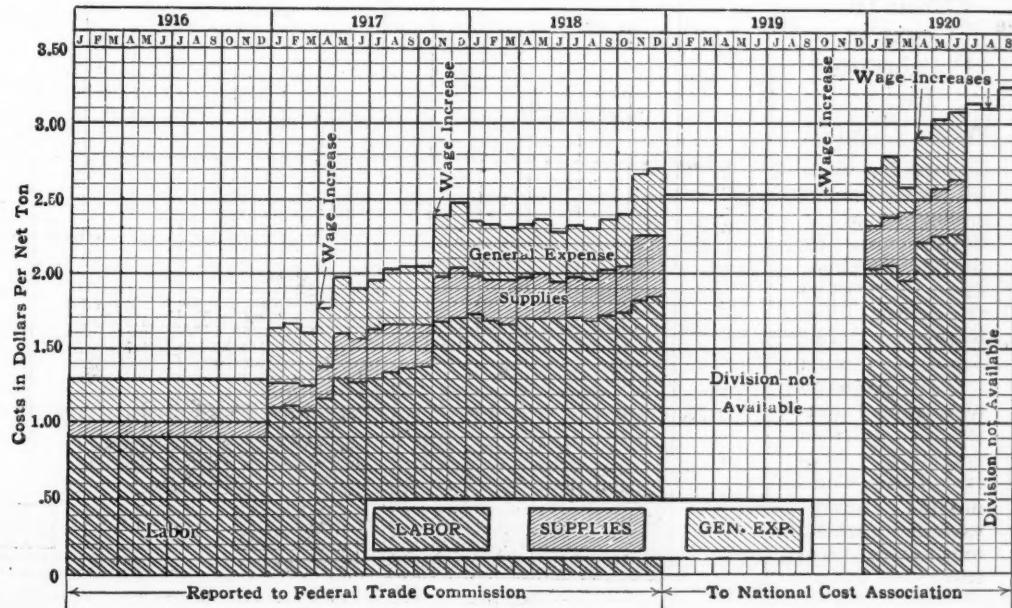
### COSTS AFFECTED BY VARIATION IN PRODUCTION

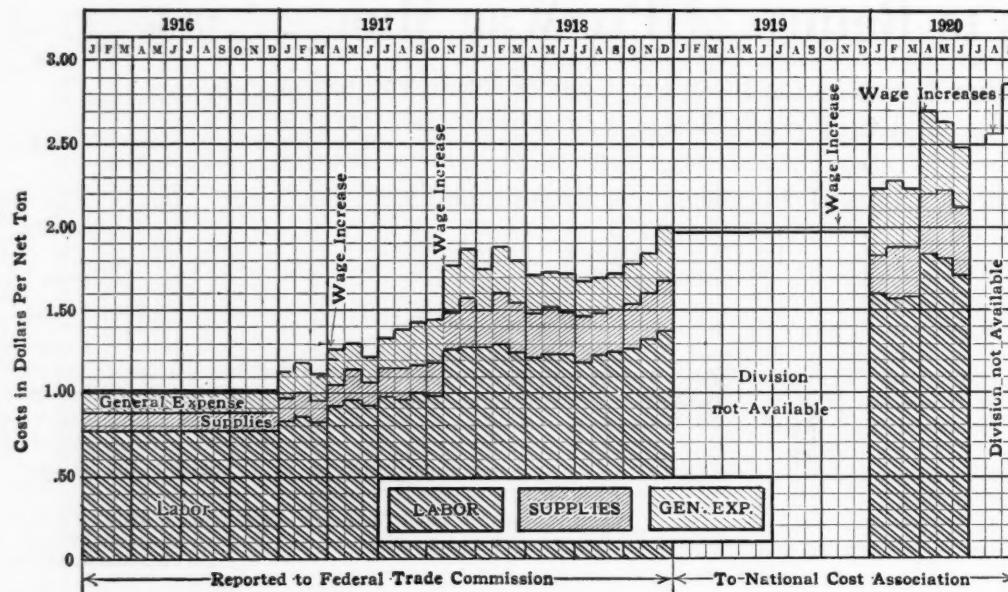
The second chief factor in causing changes in the per-ton cost is the fluctuation in the tonnage produced. Obviously the greater the divisor, the less per ton will be the regular upkeep expenses—whether in supplies or in the general overhead charges. But also the proportion of so-called "non-productive" labor employed in the mine is so large with relation to the labor paid on a per-ton basis that an increase in production will often materially decrease the total labor cost. In fact, the increase in production may be so great as to obscure, for a time, the direct effect of an increased wage scale.

There is little published information available as to costs prior to 1916. There is reason to believe that for the period immediately preceding the war, while costs had been gradually increasing, (leaving out of account the effect of fluctuations in production), there was no sudden jump, the increase taking place in the wages from time to time hav-

### Production Costs in Central Pennsylvania

Figures for 1916-18 cover annual production of 9,000,000 tons by thirty-three operators; those for 1919-20 are from the National Coal Association and cover 11,000,000 tons annual output by fifty-nine operators. Federal Trade Commission figures exclude selling expense from cost.





### Production Costs in Ohio No. 8 District

Figures for 1916-18 cover annual production of 7,500,000 tons by fourteen operators; those for 1919-20 are from the National Coal Association and cover 7,300,000 tons annual output. Federal Trade Commission figures exclude selling expense from cost.

ing been relatively small as compared to total cost. The 1916 costs, therefore, can be regarded as high water mark for a number of years previous. The experience of the anthracite field, where published labor costs are available as far back as 1913, supports this conclusion. There labor costs on fresh-mined coal of operators who produced about 60,000,000 tons annually were \$1.62 per gross ton in 1913, \$1.62 in 1914, \$1.63 in 1915 and \$1.75 in 1916.

The accompanying charts for all of the principal producing fields in the United States—these fields produced about 275,000,000 tons in 1918—show the rapid rise of costs since 1916 and also give some measure of the distribution of costs. The figures for 1916-1918 are taken from the Federal Trade Commission reports, those for 1919 and 1920 from the reports made by operators to the National Coal Association, and tabulated by the Senate Committee on Reconstruction ("Calder committee"). The allocation of these costs to labor, supplies and general expense for January-June, 1920, has been compared on the basis of the distribution shown in the Federal Trade Commission bulletins which covered the first half of 1920. The fields or districts are those established by the Engineer Committee of the Fuel Administration, and are defined as follows:

(1) *Southwest Field, Pennsylvania:* The counties of Allegheny, Westmoreland, Fayette, Greene and Washington, in the

State of Pennsylvania, except (1) that portion of Allegheny County from the lower end of Tarentum Borough north of the county line; (2) the territory in Westmoreland County from a point opposite the lower end of Tarentum Borough, north along the Allegheny River to the Kiskiminetas River, along the Kiskiminetas River eastward to the Conemaugh River, and continuing along the Conemaugh River to the county line of Cambria County; (3) operations on Indian Creek in Westmoreland County; and (4) operations in the Ohio Pyle district of Fayette County.

(2) *Central Field, Pennsylvania:* The counties of Tioga, Lycoming, Clinton, Center, Huntingdon, Bedford, Cameron, Elk, Clearfield, Cambria, Blair, Somerset, Jefferson, Indiana, Clarion, Armstrong, Butler, Mercer, Lawrence and Beaver, and operations in Allegheny County from the lower end of Tarentum Borough north to the county line, and in Westmoreland County from a point opposite the lower end of Tarentum Borough north along the Allegheny River to the Kiskiminetas River and along the Kiskiminetas River eastward to the county line of Cambria County, operations on the Baltimore & Ohio R.R. from the Somerset County line to and including Indian Creek and the Indian Creek Valley branch of the Baltimore & Ohio R.R.

(3) *Pocahontas Field, West Virginia:* Operations on the Norfolk & Western Ry. and branches west of Graham, Va., to Welch, W. Va., including Newhall, Berwind, Canebrake, Hartwell and Beech Fork branches; also operations on the Virginian R.R. and branches, west of Rock to Herndon, W. Va.

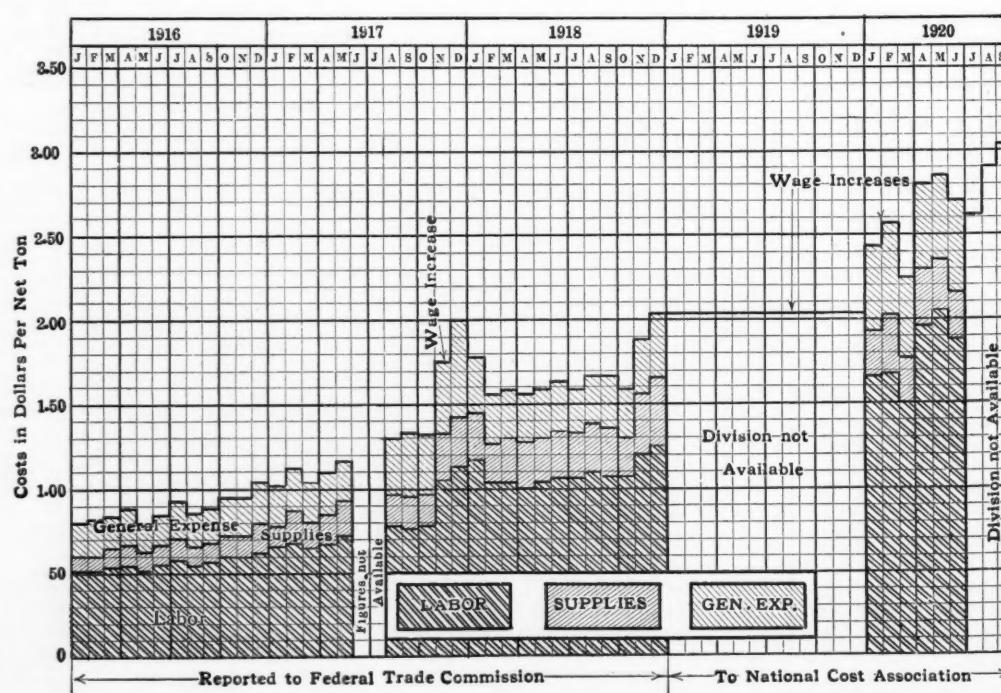
(4) *District No. 8, Ohio:* The County of Monroe, the County of Belmont, except the township of Warren and operations in the 8-A vein in Flushing and Union Townships, the County of Harrison except the townships of Monroe, Franklin, Washington and Freeport, and the County of Jefferson except the townships of Brush Creek, Saline, Ross, Knox and Springfield.

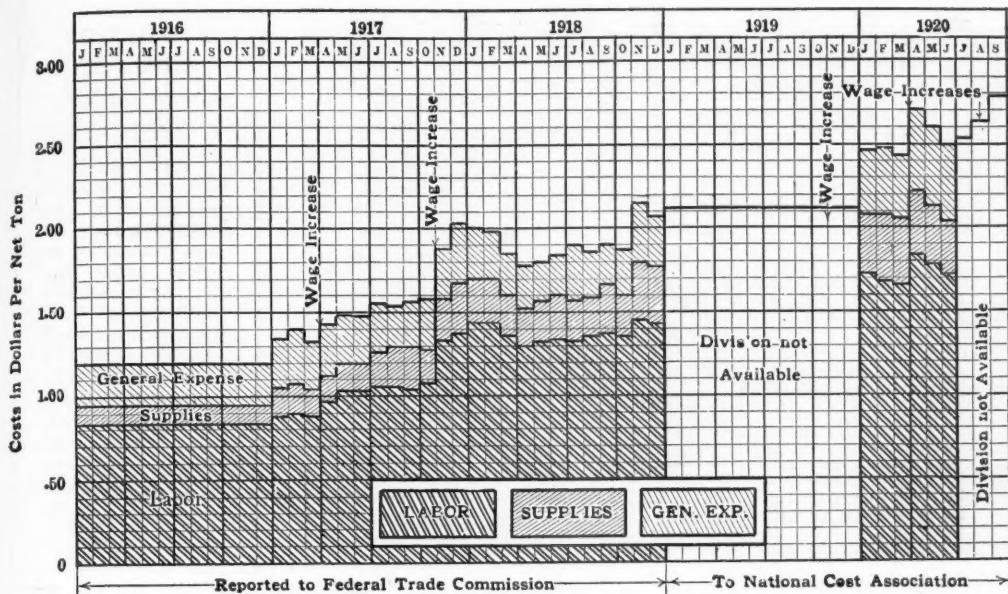
(5) *Bituminous Field, Indiana:* Coal mined in the State of Indiana other than Brazil Block coal.

(6) *District No. 6, Illinois:* Including Marion, Jefferson, Franklin, Williamson, Johnson, Hamilton, Saline, White, Gallatin, and mines along the main line of the Illinois Central R.R. be-

### Production Costs in Pocahontas Field, West Virginia

Figures for 1916-18 cover annual production of 7,000,000 tons by sixteen operators, those for 1919-20 are from the National Coal Association and cover 2,600,000 tons annual output by thirteen operators. Federal Trade Commission figures exclude selling expense from cost.





### Production Costs in S.W. Pennsylvania

Figures for 1916-18 cover annual production of 23,000,000 tons by seventeen operators; those for 1919-20 are from the National Coal Association and cover 8,000,000 tons annual output by nine operators. Federal Trade Commission figures exclude selling expense from cost.

tween Vandalia and Carbondale in Clinton, Washington, Perry and Jackson Counties.

The charts show clearly what has happened to costs since 1916 in some of the principal fields of the United States. The increases in these fields, based on the 1916 cost, are as follows:

#### COSTS PER NET TON

(Federal Trade Commission Figures Used Exclusively)

	Pennsylvania			West Virginia				
	Southwest	Central	Pocahontas	New River				
	Labor F.o.b.	Labor F.o.b.	Labor F.o.b.	Labor F.o.b.	Mine			
1916 (base)....	\$0.82	\$1.19	\$0.92	\$1.32	\$0.56	\$0.87	\$0.74	\$1.0
Jan.-Mar., 1920	1.50	2.13	1.97	2.56	1.31	1.89	1.79	2.44
Apr.-June, 1920	1.88	2.62	2.17	2.82	1.51	2.11	1.85	2.39

#### PER CENT OF INCREASES OVER 1916

Jan.-Mar., 1920	84	179	104	94	138	118	142	124
Apr.-June, 1920	130	120	136	114	175	143	150	120

#### COSTS PER NET TON

	Ohio		Indiana		Illinois					
	No. 3	No. 8	Bituminous	No. 3	No. 6					
	Labor F.o.b.	Mine								
1916 (base)....	\$0.84	\$1.17	0.78	1.02	0.87a	1.09	0.89b	1.10b	0.86a	1.07a
Jan.-Mar., 1920	1.65	2.27	1.54	2.14	1.63	2.00	1.57	1.96	1.63	1.98
Apr.-June.....	1.64	2.09	1.79	2.47	1.94	2.41	1.77	2.21	1.85	2.29

#### PER CENT OF INCREASES OVER 1916

Jan.-Mar., 1920	97	94	97	110	87	83	77	78	89	85
Apr.-June, 1920	96	78	130	142	123	121	100	101	115	114

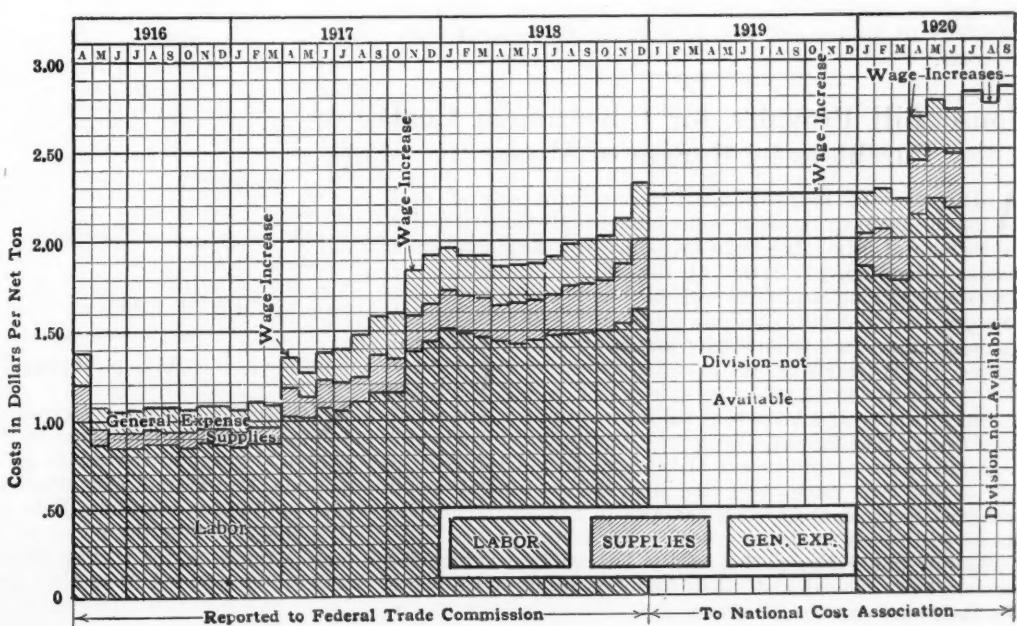
(a) April-December, 1916.

(b) July-December, 1916.

In the foregoing table the 1920 figures, while not strictly comparable because not obtained from the same operators as the 1916 figures, are probably representative enough to show in a general way the change in conditions since 1916. If the September, 1920, total cost figures of the Calder committee be compared with the 1916 total f.o.b. mine cost, the increases shown would be yet more marked, as the effect of the wage increase late in the summer of 1920 was to increase costs. Such increase, however, cannot be as exactly measured because the 1916 figures are "revised" costs and exclude selling expense, while the 1920 figures are "reported" costs, and include selling expense, etc.

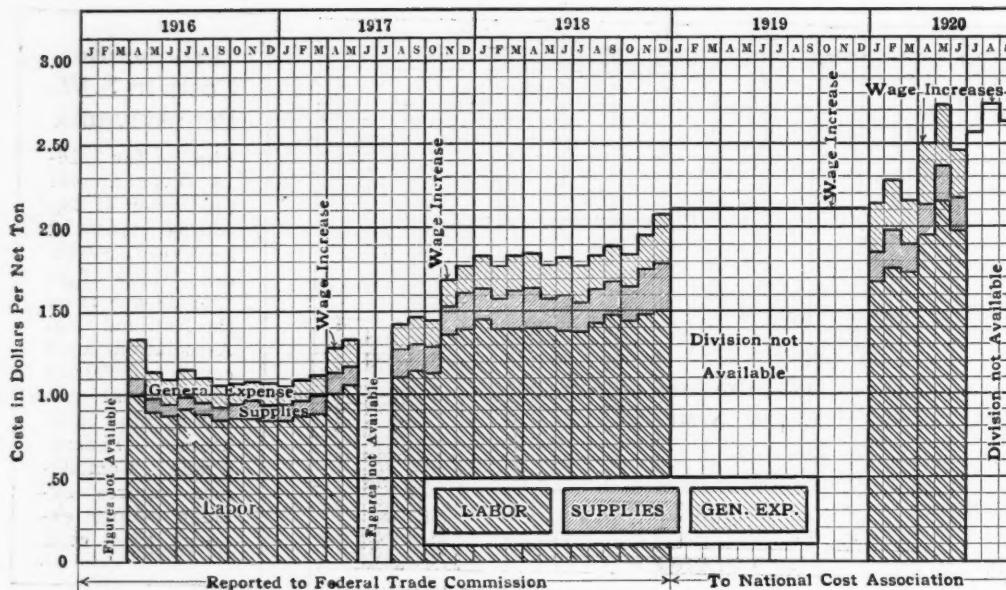
With such increases in costs as those shown above, it is evident that any return to pre-war costs, at least during 1921, is not within the range of probability. While it is conceivable that there may be some reduction in the rates of wages, it will be seen that even so drastic a cut as 25 per cent would not of itself bring costs very materially down, unless at the same time a demand developed which called out a greatly increased production. Furthermore, any substantial reduction of the wage scales, without there first being put into operation some effective measures for increasing regularity of employment, probably would lead to severe labor trouble.

As the events of the past few years have shown, labor in coal mines, just as on railroads, holds the strategic advantage of being able to tie up the whole country through



### Production Costs in Illinois No. 6 District

Figures for 1916-18 cover annual production of 12,000,000 tons by thirteen operators; those for 1919-20 are from the National Coal Association and cover the same. Federal Trade Commission figures exclude selling expense from cost.



## Production Costs in Indiana District

Figures for 1916-18 cover annual production of 14,000,000 tons by thirty-three operators; those for 1919-20 are from the National Coal Association and cover 8,800,000 tons annual output by thirty-one operators. Federal Trade Commission figures exclude selling expense from cost.

an effective strike, it is not likely that costs will be materially lessened through any reduction of wages. Neither is it likely that any material reduction in the total costs will be brought about through further falls in the prices of supplies. Nor can any important reduction be looked for through a decrease in the overhead expense. In fact, the necessary writing off of some of the heavy investment charges caused by high cost development during the past few years, in order to get the investment down to present-day values, will in many cases increase the overhead charge. Finally, while there may be some decrease in cost eventually effected, through the introduction of improved mining methods and machinery, this will be a slow process. Such decreases in the average costs as occur, therefore, are likely to be caused by the closing down of high-cost mines until a balance is reached between the demand for coal within certain price limits and the supply obtainable from mines that can afford to produce at those prices.

The lower price levels, the elimination from the market of the tonnage of the high-cost mines and the increase in demand to be looked for with a revival of industry doubtless will lead to the contracting, next spring, of a much larger proportion of the output than has been the case for several years. The experience of 1920 will not be lost on many large consumers, who now realize that they must contract early in the coal year with responsible parties, and, furthermore, for their own protection they must make better provision for reserve storage at point of destination. All of this can be counted upon to have a steady effect on regularity of production, and, to that extent, to keep down the costs.

## House Bill Provides for Government Coal Purchases by Bureau of Mines

A BILL for the uniform selection and purchase of coal for the government service throughout the country under the Bureau of Mines has been introduced by Representative Rhodes, Missouri, chairman of the House Committee on Mines and Mining, to which the bill has been referred. It provides that the bureau shall select and contract for all coal and other fuel required by any branch of the federal service in Washington or elsewhere within the United States. Provision is made for the selection and purchase of coal direct by any branch of the service upon approval of the bureau. The bureau also is to investigate the coal- and other fuel-burning equipment of the branches of the federal service and their methods of handling, storing and using all fuel, and to recommend such changes in equipment and its use as will result in the greatest fuel economy.

The bill would also authorize the bureau to contract for the purchase of coal and other fuel for different branches of the federal service in advance of the availability of ap-

propriations for payment thereof, contracts not to exceed the necessities of the current year. The bill also authorizes the branches of service to purchase under contracts made by the bureau during April, May and June yearly of such coal and other fuel for their use during the following fiscal year as may be practicable to store at points of consumption, payment to be made by each branch of the service from its appropriation.

It is proposed that the expense of administering the law shall not exceed \$100,000 a year, to be made up of assessments of 2c. a ton on each ton of coal purchased for each branch of the service.

## U. S. Chamber of Commerce Combating Coal and Live Stock Bills

A VIGOROUS fight has been opened by the Chamber of Commerce of the United States on legislation pending in Congress which in the view of the Chamber provides for government operation of industry. The measures on which the attack is centered as substituting government for private conduct of two of the great basic industries of the country are the Federal Coal Bill and the Federal Live Stock Bill.

Copies of a brief pointing out the dangers contained in the two bills were sent to members of the Senate and the House of Representatives with a letter signed by Joseph H. Defrees, president of the Chamber, asking careful consideration of the arguments advanced against the two bills. At the same time the headquarters of the Chamber sent out to the fourteen hundred organizations and the more than fifteen thousand corporations, firms and individuals included within the Chamber's membership a request that they lend their individual assistance in opposing the legislation.

The Federal Coal Bill, known also as the Calder bill, has been introduced in the Senate and is before the Senate Committee on Manufactures. The Federal Live Stock Commission Bill, popularly known as the Packers' Bill, has been passed by the Senate. A similar measure, much more moderate in form, is before the House.

## Mine Payroll Stolen

NOTICE has been received in Louisville, Ky., of the robbery of a registered mail pouch containing \$50,000 in cash shipped to the mines of the Wisconsin Steel Co. at Benham, Ky., from a Cincinnati bank, due to arrive at Benham on Friday morning, Feb. 11, for the weekly payroll. It is reported that the pouch was stolen on Thursday night from a truck on the station platform at Corbin, Ky., where mail is transferred from the Cincinnati-Atlanta line to the Cumberland Valley Division of the Louisville & Nashville.



# Problems of Operating Men

Edited by  
James T. Beard



## Progressive Standardization

Standardization That Is Not Progressive Is Obstructive and Must Often Prove a Hindrance to the Adoption of Approved Methods and Systems in Any Industry but Particularly So in Coal Mining

AT the December meeting of the Coal Mining Institute of America, held in Pittsburgh, the question of standardization was discussed. The topic proved an interesting one to many of those present and, for a time, there was a lively debate that developed some valuable points, *Coal Age*, Dec. 23, p. 1283, which made some of the contestants sit up and take notice.

Since that time, I have observed that the expression "Progressive Standardization" has come into use in connection with the study of plant management. No long argument is necessary to convince the unprejudiced mind that the word progressive describes the kind of standardization that is to be desired in every industry.

The laws of our country are no more than standardized social customs put into the form of a code by the primary authorities constituting our government. No one questions the advantages gained by a code of laws designed for the guidance of conduct and the protection of life and property. However, what is good for one generation may not prove to be equally good for another.

### STANDARDS BECOME OBSOLETE WITH LAPSE OF TIME

With the lapse of time a standard code becomes obsolete. This makes a new one possible and illustrates the idea of progress as expressed by the words progressive standardization in government. The same is true in industry. The practical meaning of progressive standardization is: Much has been accomplished, but more and better is to follow. The movement is ever onward. To stop would be to sprag the wheels of progress.

In the presentation of a new but thoroughly tested idea one often meets with the objection: "I have standardized on such and so, and am not interested in your proposition." Nothing can be clearer to the unprejudiced mind, however, than the fact that standardization is a splendid idea, provided it does not stand in the way of accepting cheaper and better methods of obtaining the same results.

Everyone wants to be progressive, but we are often blinded by the thought

that we have adopted the method or equipment that, to our way of thinking, has seemed the most desirable. Let us forget it and conclude that "the best is not yet." No method or system is so complete but that time and practice can suggest improvement. *Progress* is the watchword now and ever.

New York City. L. S. YOUNGLING.

### Successful Working of Low Coal

Describing a daily production of 1,500 tons of coal, from a 90-ft. shaft electrically equipped and standardized throughout, the operation being in a 40-in. seam of bituminous coal, in Indiana County, Pa.

I HAVE been reading the interesting article of S. D. Hainley, *Coal Age*, Dec. 30, p. 1334, and am in hearty accord with everything he has said. It would be difficult for me to add very much from my own experience.

Visiting many mines in different localities, one learns that there is a wide difference of opinion in respect to modern methods of coal extraction. On this account, I consider it more profitable to give an account of what has been done in the working of low coal than to express a personal opinion.

Guided by that belief I have chosen to describe a successful operation in a 40-in. seam in Indiana County, Pa. We all realize that every coal mine is a proposition in itself, and a plan that has proved successful in one operation will not necessarily be as successful when employed under seemingly similar conditions in another case.

### MINE ELECTRICALLY EQUIPPED

The mine to which I refer is opened by a 90-ft. shaft and is electrically equipped throughout. The management has standardized on certain designs of motors, pumps, chain machines and drills. The shaft is equipped with an electric hoist that brings to the surface twelve hundred 1½-ton cars, in an eight-hour shift.

This is a double-compartment shaft and the cages dump automatically by the gooseneck arrangement. Seven men handle the entire daily output of 1,500 tons of run-of-mine coal. This crew includes a cager, tripmaker,

coupler, weighboss, a checkboy to handle the checks and two men ("chunkers") who trim and handle the railroad cars as these are loaded.

There are 250 mine cars, which are kept in good condition, a repair shop being located at the shaft bottom. The carwheels are lubricated every ninety days with the best grease on the market, which makes them so easy running that they are pushed both ways to and from the faces in the rooms which are level.

The main north and south entries are driven on the strike, with sufficient grade for good drainage, while the branch entries are made to have a 3 per cent grade in favor of the loaded cars. Four 6-ton and two 10-ton trolley locomotives are employed to haul the coal. The tracks are well ballasted, 45-, 35- and 20-lb, rails being laid on wood and steel ties and coupled with splice-bars at every joint, including jumpers, to provide a good rail return. The longest haul is a mile-and-a-quarter and each car is dumped five times a day, which requires that they be kept moving.

### INJURIOUS EFFECT OF ACID MINE WATER ON EQUIPMENT

In this mine, a difficult feature to be overcome was the large amount of highly acid water, which had to be pumped through wooden pipe lines. Centrifugal pumps were used at the shaft bottom, while plunger pumps were employed in the productive sections of the mine, all the pumps being electrically operated.

So injurious was the mine water to all metal parts that it had to be kept from contact with the rails of the track. Otherwise the bottoms of the rails and the spikes holding them would have been rotted out in from four to six weeks. The inflow into this mine was so strong that it was found necessary to pump eight tons of water for every ton of coal hoisted.

While the depth of the hoisting shaft was only ninety feet, the cover overlying most of this seam varied from 100 to 800 ft. About 50 per cent of the roof slate was good, while the rest ran from medium to very bad. In sections where the roof was bad, the coal was higher and of better quality.

One bad feature in the workings was the multiplicity of drippers, producing an undesirable condition to work under. The rooms were driven 30 ft. wide, to a depth of 250 ft., where the roof conditions would permit. A single track was laid in each room, which was timbered with posts set 4½ ft. apart and

kept close to the face. Two men were employed in each place and they did all the work, including drilling and shooting the coal, laying track and setting timber.

All entries were driven 22 ft. wide and double-shifted, as it requires a rapid development to maintain a 1,500 ton output in this low seam. The road is kept on one side of the entry, with a good clearance between the track and the rib. The roof is brushed over the track, this work being done by a crew of three daymen. The material taken from the roof and all refuse is stowed on the gobside of the track.

#### GOOD PACKWALLS ESSENTIAL

One thing that requires close attention is the building of good gobpacks. On that account, regular slate men are employed to brush the roof and build gobwalls at the side of the road. Where this is left to the miners, the work is but half-done, and the entry is generally kept in a dirty condition, as the boss is apt to think it is the best he can expect of the average miner.

Other instances could be given of mines that are operating successfully in low coal; but few of them present the same difficulties that had to be encountered in the case just cited. I may say, also, that few operations have been as successful in maintaining a good output and preserving the quality of the coal sent to the surface and shipped. The case mentioned furnishes a remarkable instance of what can be accomplished under good management.

Pikeville, Ky. GEORGE EDWARDS.

#### ANOTHER LETTER

*Describing operations in a Nova Scotia coal field underlaid with five or six seams that range from two to three feet in thickness, the beds being inclined at an angle varying from 20 to 30 degrees.*

HAVING worked in a dozen different seams of coal where the thickness ranged from 16 in. to 3 ft., I have been interested in what has been said regarding the working of low coal. The operations with which I have been connected have all been paying propositions. All, except one of these, were worked on the longwall system of mining, the one exception having employed the pillar-and-stall method in mining a seam 3 ft. thick.

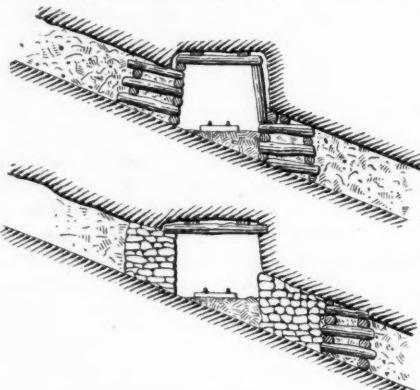
There are, I believe, more thin seams than thick ones, which makes the question of mining low coal important. I have known instances where the coal from an 18-in. seam and that from an underlying 4-ft. seam were hoisted in the same shaft, and the men working the thin coal made equally as good wages as those mining the thicker seam. In all the places where I have worked hand-pick mining was employed and no cutting machines were in use.

A brief reference to a coal field in my vicinity will be of interest in this connection. The field extends a distance of nine miles, but its breadth has not been fully determined. There are five or six

seams of coal, ranging from 2 to 3 ft. in thickness, and the measures are inclined at an angle of between 20 and 30 deg. The coal is generally worked longwall and the face advanced either up the pitch, or across the inclination so as to lessen the grade of the road.

What appeals to me as being of chief interest, however, is the system of timbering the roadways employed in these seams. The method in use is to build cribs of 4-ft. props on each side of the road, as indicated in the upper portion of the accompanying figure. As far as I know, this has been the general method employed in these seams in the past.

Many a time I have examined cribs and wondered if they were actually necessary in the working of a 32-in.



CRIBBING AND WALLING ON PITCHES

seam of coal, as I had never seen a crib used in districts where I have worked under good and bad roof alike. In my experience, the stone from the brushing of the roads was all that was required for building the sidewalls.

Allowing that cribs are necessary to reinforce these walls, in seams of 3-ft. thickness or more, it appears to me that the cribs on the low side of the road should be built at a little distance down the pitch and the space above filled with the bushing, as I have shown in the lower portion of the figure. This plan would furnish a good foundation for the building, which could then be made a good solid wall up to the road and there would be no tendency for it to slip down the pitch.

#### WALLING THE HIGH SIDE OF THE ROAD AFFORDS BETTER SUPPORT

The building of the cribs on the high side of the road will take a longer time and require extra care in placing the timbers and giving them a good foundation. If the roof is a soft soapstone or shale it may have a tendency to crumble above the crib. Here too, it seems to me that better support would be given by building a good wall, say 6 ft. in breadth, on the high side of the road. I observed that some of the props in the high-side cribs had been shoved out of place and the support of the roof was greatly weakened.

The opinion seems to prevail throughout this field, however, that the cribs furnish a far greater support to the roof and prevent its caving in on the roads than any other method that could

be employed. In my own practice, I have experienced very little trouble from caving. Results show that a longwall roof will settle in its own way, crib or no crib. The steady advance of the working face insures a uniformly gradual settlement of the roof.

Though I have not mentioned this feature, it is clear that the question of cribbing, or building packwalls of stone, must be determined largely by the cost of timber and the possible supply. The point I question is whether timber cribs are necessary in a seam 2 ft. 8 in. in thickness where the inclination is 20 deg. or more.

MAC.

Cumberland, N. S., Canada.

#### A THIRD LETTER

*Working low coal must be made attractive and every point looking to economy in production must be carefully considered.*

THERE is hardly a question but that the successful working of a low-coal seam requires the thoughtful study of all the conditions. The points brought forward in the letter of S. D. Hainley, *Coal Age*, Dec. 30, p. 1334, are most practical and economical, in respect to their bearing on the success of the operation. Permit me to mention one or two others of equal importance.

First, it has been my experience that, in providing the necessary headroom on the roads when working thin coal, it is more practicable to lift the bottom than to brush the roof. In either case, of course, there are yardage charges that must be met and cannot be avoided. The peculiar advantage in lifting bottom where this is required in the rooms is that the miner then works on a bench and is not troubled with water, which would make his work unpleasant and objectionable.

#### ADVANTAGES GAINED BY LIFTING BOTTOM IN LOW COAL

When mining in low coal, a man must lie or sit the most of the time on the bottom, which he cannot do comfortably if that is wet. Again, there is the advantage that the coal is more readily loaded off the bench into the car, which stands on the track at a somewhat lower level. Every miner will appreciate what this means to him in the loading of his coal. These minor points, often overlooked, make the work more attractive to the miner and constitute an important feature in the working of low coal.

Last, but by no means least, is the application of mechanical means for mining and loading the coal, with a view to saving labor and increasing the production per man. Today, mechanical inventions are keeping pace with the growing need of such devices in coal mining. This feature justifies a thorough investigation of the latest and most up-to-date drilling, cutting and mining machines now on the market. I believe that the time is near at hand when all low-coal seams of considerable extent will be mined and loaded wholly by machinery with less expense.

Thomas, W. Va. OBSERVER.

### Effect of Barometric Change on a Sealed Section of a Mine

*Changes in barometric pressure are suggested by this writer as the possible cause of observed changes in the breathing of a sealed section of a mine.*

KINDLY permit me to offer the following suggestions regarding the probable cause of the observed change in the breathing of a sealed section of a mine, as described by "Fireboss," *Coal Age*, Dec. 30, p. 1336.

The statement was made that a section of a mine containing about twenty rooms had been abandoned and sealed off, presumably to prevent the escape of the gases accumulating in that section. A pipe had been built into one of the seals and provided with a valve to enable the gases escaping from the section to be tested.

It is further explained that it had been the custom for the fireboss to open this valve when making his examination of the mine in the morning, and observe whether the air was being drawn in or blown out from the section. It is said that the tests showed that air was being drawn into the enclosure during the nine consecutive days. Then,

for five consecutive days following, it was observed that air and gas was blown out.

In answer to the question as to the cause of this observed change, allow me to suggest that it can probably be attributed to a change in barometric pressure. It would have been well if the correspondent had given the pressure of the atmosphere at the time of making each test.

If these changes were shown to correspond; in other words, if it was shown that the barometer fell during the night of the ninth day and was lower during the following five days when the breathing was outward, but stood higher during the nine preceding days when the breathing was inward, the conclusion would be natural that the change in breathing was due to the atmospheric condition.

My belief is that any considerable increase in atmospheric pressure would have the effect to force the mine air into the sealed section. Then, any drop in atmospheric pressure would be followed by the expansion of the gases within the section, and they would flow out onto the entry. THOMAS CHESTER.

Pittsburgh, Pa.

### Inquiries Of General Interest

### Treatment of Feedwater to Prevent Corrosion in Boilers

**The Quantity of Each Reagent Used for the Purification of a Given Quantity of Water, To Be Used as Feedwater in a Steam Boiler, Should Be Calculated from the Analysis of the Water**

HAVING to use a hard feedwater in our boilers we have been treating this with soda ash and lime to soften the water, besides filtering it through sand for the purpose of removing the sediment before permitting the water to pass into the boilers.

Following is an analysis of the water before and after treatment:

(Before)	Grains per Gal.	Parts in 100,000
Silica.....	.090	0.154
Iron oxide and alumina.....	.020	0.034
Calcium sulphate.....	6.056	10.368
Calcium carbonate.....	10.121	17.327
Magnesium carbonate.....	5.653	9.678
Magnesium chloride.....	2.519	4.313
Sodium chloride.....	2.271	3.888
Total solids.....	26.730	45.762

In treating this water we are using 100 lb. of soda ash and 200 lb. of quicklime in 60,000 gal. of water.

(After)	Grains per Gal.	Parts in 100,000
Silica.....	.06	0.103
Iron oxide and alumina.....	.06	0.103
Calcium carbonate.....	.32	0.548
Magnesium carbonate.....	2.16	3.698
Magnesium sulphate.....	.18	0.308
Total.....	2.78	4.760

The suggestion has been made of using zinc in the water, and I would

like to ask what effect would pure zinc have when placed in a boiler that is in use. Would it be effectual in keeping down corrosion by softening the water and the scale that is deposited on the tubes and drums? I shall greatly appreciate any information you can give me in this regard.

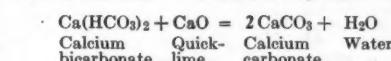
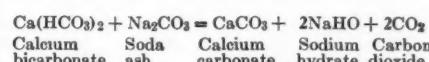
MASTER MECHANIC.  
Universal, Ind.

The analysis of this feedwater before treatment shows that it contains 26.73 grains to the gallon solid matter, or  $26.73 \times 17.12 = 45.762$  parts of solid matter in 100,000 lb. of water, which is well within the practical limit of treatment. A water containing 100 lb. of solid matter per 100,000 lb. of water, it is generally agreed, should be condemned for use as feedwater unless a better supply is not obtainable.

However, from the analysis given, we estimate that in the treatment of this water there is too large an amount of the reagents used. We would suggest that for the removal of these impurities it would be better to use 105 lb. of

good quicklime and 54 lb. of a good quality of soda ash, in treating 50,000 gal. of the water.

As is well known, the carbonates of the alkaline earths, barium, calcium and magnesium, are held in solution in many waters by reason of the presence of carbonic acid. In other words, the alkaline earths then form bicarbonates, which are soluble. But any substance, as soda ash or quicklime, that will absorb the carbonic acid will reduce the bicarbonates to carbonates, which are insoluble and precipitate in the water. The water should be heated to facilitate and complete these reactions, which are expressed by the following equations:



For the purpose of preventing the formation of scale in the use of an impure feedwater in a boiler, petroleum (coal oil) introduced into the boiler in comparatively small quantities has been found efficacious. The action of the oil is to coat the sediment floating in the water, and the surface of the metal on which the scale is deposited with an oily film that prevents very largely the coagulation of the sediment and its attachment to the metal surface.

In any case when using a feedwater that is not pure or that contains sediment the boiler should be blown off at short regular intervals daily, or once or twice a week, according to the purity of the water. This is necessary to remove the sediment from the boiler and drum.

The use of zinc in large plates, say 12 in. long, 6 in. wide and  $\frac{1}{8}$  in. thick, suspended within the boiler and having a good contact with the metal tubes and sheets is a means used successfully in marine boilers. It is particularly good for purifying a feedwater containing salt (sodium chloride). But it is hardly necessary in the present instance, as the small amount of sodium chloride present should be held in solution in the water.

### Pittsburgh Coal Proposition

*A maximum recovery of coal is required in the working of this seven-foot Pittsburgh seam, which must be accomplished without damage to the surface, as the operator owns the coal rights only.*

KINDLY permit me to present the following proposition for discussion by *Coal Age* readers who have had experience in the working of the Pittsburgh seam. I would like to ascertain what system of extraction or method of working should be employed to insure the largest extraction of coal and entail no risk of damage to the surface. The proposition is to take out the coal underlying 300 acres of land when the operator owns the coal rights only.

The seam will average 7 ft. in thickness and the depth of cover ranges from zero at the outcrop to about 300 ft. at the boundary, distributed about as follows: Starting from the outcrop, approximately 143 acres has a cover ranging from 0 to 100 ft. in depth; 34 acres, a cover of 100 to 150 ft.; 51 acres, 150 to 200 ft.; 56 acres, 200 to 250 ft.; and lastly 16 acres with cover ranging from 250 to 300 ft. in depth.

A general section of the strata at the thickest point would include the following in their order of succession:

	Feet
Surface	10
Limestone	15
Sandy shale	44
Sandstone	30
Coal	1
Shale	5
Limestone	65
Sandstone	25
Coal	5
Sandstone	25
Limestone	41
Coal	4
Limestone	5
Sandstone	25
Pittsburgh coal	7
Hard fireclay	...

As previously remarked, the owner of the coal possesses no rights whatever on the surface and is liable for damage of any kind resulting from the extraction of the coal. While I have, myself, some very definite ideas in regard to this proposition, it will be a pleasure to learn of the experience of others who have mined the Pittsburgh coal and can suggest what thickness of pillars should be left for the protection of the surface to insure the operator against liability for damage.

Uniontown, Pa. Mining Engineer.

The mining of the Pittsburgh seam under specified conditions is always of interest, and we gladly present this proposition for discussion by those who have had experience in working this coal under conditions similar to those described by this correspondent. Unfortunately, the inclination of the seam has not been given and will have to be assumed according to the writer's knowledge and experience.

## Examination Questions Answered

### Miscellaneous Questions

(Answered by Request)

QUESTION—With a fan developing 30 hp. and producing but 50 per cent of useful effect, if the water-gage reading is 2.3 in., what quantity of air should be circulated per minute?

ANSWER—The effective work in this case is  $0.50(30 \times 33,000) = 495,000$  ft.-lb. per min. The pressure corresponding to a 2.3-in. water gage is  $2.3 \times 5.2 = 11.96$  lb. per sq.ft. Then, the quantity of air in circulation, under these conditions, will be  $495,000 \div 11.96 = 41,400$  cu.ft. per minute, nearly.

QUESTION—An air current of 3,000 cu.ft. per min. is charged with gas to its highest explosive point, how much fresh air must be added to prevent the formation of a cap?

ANSWER—The answer to this question will depend on the ability of the observer to detect the first formation of a cap, and the kind of lamp used for that purpose. A mixture of gas and air, at its maximum explosive point, contains 9.46 per cent of gas. The volume of gas in this current is, therefore,  $0.0946 \times 3,000 = 283.8$  cu.ft. per min. Assuming the first indication of a cap is observed when one per cent of gas is present, the volume of air and gas in this current would be  $283.8 \div 0.01 = 28,380$  cu.ft. per min. The volume of air that must be added to produce this condition is, therefore,  $28,380 - 3,000 = 25,380$  cu.ft. per minute.

QUESTION—Can a miner live in air in which the oxygen content is reduced to 17 per cent?

ANSWER—Yes. Quoting from "Mine Gases and Ventilation," Second Edition, page 4, we read: "When no carbon dioxide is present in the air the oxygen content may fall as low as 14 per cent before much difficulty is experienced in breathing; but air containing but 10 per cent is no longer breathable and will cause death quickly by suffocation."

QUESTION—An entry in a mine is 7 x 10 ft. in section and 6,720 ft. long, what is the velocity of the ventilating current passing through this entry when the water-gage reading is 2 in.?

ANSWER—The rubbing surface of this entry is  $s = 2(7 + 10)6,720 = 228,480$  sq.ft. and the sectional area  $a = 7 \times 10 = 70$  sq.ft. The pressure corresponding to a 2-in. water gage is  $p = 2 \times 5.2 = 10.4$  lb. per sq.ft. Then, calling the coefficient of friction  $k = 0.00000002$  we have for the velocity of the air current, in this case,

$$v = \sqrt{\frac{pa}{ks}} = \sqrt{\frac{10.4 \times 70}{0.00000002 \times 228,480}} = 576 + \text{ft. per min.}$$

QUESTION—Given the dimensions of an arched airway as follows: 9 ft. high to top of arch, and the radius of the arch being 4 ft. 6 in., if the observed velocity of the air current is 450 ft. in a minute and a half, what is the total quantity of air passing per minute?

ANSWER—Assuming this is a semicircular arch, the width of the airway is twice the radius of the arch or  $2 \times 4\frac{1}{2} = 9$  ft. The height of the sidewalls, measured from the floor to the spring of the arch, is found by subtracting the

radius of the arch from the height of the crown above the floor; thus  $9 - 4\frac{1}{2} = 4\frac{1}{2}$  ft. The rectangular portion below the arch, then, has a sectional area of  $9 \times 4\frac{1}{2} = 40.5$  sq.ft. The area of a semicircle whose radius is  $4\frac{1}{2}$  ft., diameter 9 ft., is  $\frac{1}{2}(0.7854 \times 9^2) = 31.8$  sq.ft. The entire sectional area of the airway, is, therefore,  $40.5 + 31.8 = 72.3$  sq.ft.

If the air travels 450 ft. in 1½ min., the velocity of the current is  $450 \div 1.5 = 300$  ft. per min. The volume of air passing in this airway is, then,  $300 \times 72.3 = 21,690$  cu.ft. per min.

QUESTION—What are the advantages gained by firing shots by electricity?

ANSWER—By the use of the electric battery in blasting, the operator or miner is in a safe place when firing the shots. He does not have to light a fuse or squib and run with a chance of not reaching safety before the shot goes off. There is less danger of a delayed or premature blast. Electric firing makes it possible to fire two or more blasts, at the same time, in the same place, without the danger that is always present when an attempt is made to fire more than one shot in a confined or poorly ventilated place, by means of fuse or squibs.

In electric firing all the blasts are exploded at once. When fuse or squibs are used it is not possible to determine exactly the order in which the shots will explode. The one that should go off first may be delayed, with the result that the remaining shot will probably blow its tamping. Again, the discharge of one shot following another, consecutively, in the same place, may give rise to a windy shot or a local explosion, because of the ignition of the gaseous products of the first shot. This is impossible in electric firing in a mine properly ventilated.

QUESTION—A ventilating fan is producing a water gage of 2 in. at 60 r.p.m.; what should the water gage be when the fan is running at a speed of 40 r.p.m.?

ANSWER—Approximately, the quantity of air circulated by a fan varies as the speed (r.p.m.) of the fan, and the pressure or water gage as the square of the speed; in other words the water-gage ratio is equal to the square of the speed ratio. On that basis, calling the required water gage  $x$ , we have,

$$\frac{x}{2} = \left(\frac{40}{60}\right)^2 = \left(\frac{2}{3}\right)^2 = \frac{4}{9}$$

$$x = 2 \times \frac{4}{9} = 8/9 = 0.88 \text{ in.}$$

In practice, however, the yield of a fan, in quantity and water gage, falls short of this amount. Approximately, the fifth power of the quantity varies as the fourth power of the speed of the fan, or the fifth power of the water gage as the eighth power of the speed. On that basis, the water-gage ratio is equal to the fifth root of the eighth power of the speed ratio, and we have for the required water gage,

$$x = 2 \sqrt[5]{(4/9)} = 2 \times 0.27 = 0.54 \text{ in.}$$

## Morrow Disavows Opposition to Super-Power Survey; Sinister Motive Denied by Dr. G. O. Smith

**A**S A RESULT of statements published by *Coal Review*, the publication of the National Coal Association, Dr. George Otis Smith, director of the U. S. Geological Survey, felt called upon to explain to a Senate committee that there is nothing sinister in the super-power survey which is being made in the Boston-Washington area. One of the statements published by *Coal Review* is as follows:

"Light from the big electrical utilities is shed by Dr. Smith of the Geological Survey on the super-power project which would invade the coal producers' eastern market to the estimated extent of 30,000,000 tons a year. It seems that the big electrical companies, desirous of entrenching themselves in a fat and lasting business along the Atlantic seabord, are giving their time, their men and their money to further the plan. This mammoth project is being forwarded under the guise of conserving coal."

After quoting extracts from the article, Dr. Smith told the La Follette committee, which is considering the advisability of imposing certain Federal regulations upon the coal industry, that the super-power survey is being conducted under the "guise" of conserving coal. "That is the actual purpose of the investigation," said Dr. Smith, "and it seems to me that when private business introduces the question of the motive of a government bureau simply because Congress authorized the receipt of certain money from certain people, it is an extraordinary proposition.

"These people are contributing—I do not know in what amounts and I do not care. The people who are supporting it (the super-power survey) are the railroads, who are to be the consumers of power if we have electrification of the railroads; the power companies; the public utilities, who are producers of power; and the electrical machinery people. Every one of those interests is parallel and is going in the same direction as the public's interest. If the public utilities can get power cheaper, the state regulations provide that they must sell it cheaper.

### DISTORTED IDEAS ON RIGHTS OF PRIVATE BUSINESS

"As to that 'fat and lasting business' I will say that we want to improve the public utility business, but it cannot become very fat under state regulation. Here we have an unregulated industry [bituminous coal] which comes before this committee and talks against regulation, pointing out someone else who is going to fatten. I bring this up not to prove anything except that I think some of us have distorted ideas about the rights of private business. Ten years ago I argued before a Congressional committee for the regulation of the coal business because I felt that the coal industry needed it. I thought it was just as good an argument that the public needed it.

"There is nothing that would be a greater calamity to this country than for the government to operate any business even one-half the size of the bituminous coal industry. It is my unqualified opinion that government operation would be a disaster because it would increase the cost of coal. It would make for a very high cost and the public would have to meet it both as consumers and as taxpayers.

"There should be some control of the industry. I believe it is justified under the general principles of the common law as well as under the constitution. That regulation is absolutely necessary unless we are going to be controlled by the industry itself. I contend that control of a basic industry like the coal trade can be exercised more wisely if put in the hands of disinterested persons than if it is left without regulation to the control of those whose interest is a dollar-and-cent interest. I am as much opposed to nationalization of the mines as I am to their being considered the absolute private property of land owners and of mine operators."

It seemed inconceivable to *Coal Age* that the National Coal Association would knowingly adopt such a policy toward the super-power survey or any other measure hav-

ing for its object the better use of coal, and to bring the matter to a focus the following letter, under date of Feb. 14, 1921, was addressed to J. D. A. Morrow, vice-president of the association. His reply removes any doubt regarding the position of the operators' association on the subject and *Coal Age* is pleased to publish both letters in full.

"My dear Mr. Morrow: The editorial lead in a recent issue of *Coal Review* on the story of Director Smith's testimony before the Appropriations Committee on the super-power survey indicated opposition of the National Coal Association to this project, because it apparently contemplates large economies in the use of bituminous coal, and consequently indicates apparent restriction of the market.

"Does the National Coal Association view the super-power survey in this light, and is the National Coal Association opposed to any program that makes for economical utilization of our coal?

C. E. LESHER,  
"Editor *Coal Age*."

### FAVORS ECONOMICAL UTILIZATION OF COAL

Mr. Morrow's reply, dated Feb. 15, 1921, is as follows:

"Dear Lesher: I have your letter of the 14th. In answering let me say that the National Coal Association is not opposed to the super-power survey, nor is it opposed to any program which makes for economical utilization of our coal. On the contrary, it is our belief that the development of better methods of utilizing coal is a necessary feature of the future economic development of the United States. We further believe that the coal industry is just as much interested in seeing such better utilization of coal as the industrial interests of the East.

"The remarkable industrial development of the United States prior to the war was based primarily upon cheap fuel, the cheapest fuel available to any great commercial nation of the world. Increases in wages and supply costs have raised the cost of producing bituminous coal in the United States since the European War began by almost 200 per cent. While fuel cost is only a relatively small item of cost in the production of most manufactured goods, it is a considerable element in the cost of some manufactured articles, and in any event the increase in fuel cost referred to places all manufactured goods on a somewhat higher level. To that extent the position of the American manufacturer competing with the manufacturers of other countries in international trade is handicapped.

### SAYS OPPOSITION WOULD BE SHORTSIGHTED

"Since the growth of industry in the United States contributes directly and immediately to the demand for bituminous coal and, therefore, means an increase in our own business, any practical project for the better utilization of coal which means a better opportunity for American manufacturers to extend their business is of direct help to the bituminous coal industry of the United States. You will, therefore, understand that it would be the height of shortsightedness for this industry to oppose such projects.

"As you know, there are other considerations which also move us to this same conclusion, but it is not necessary to go into them in detail because those which I have already mentioned are fundamental and decisive.

"I hope this answers your query satisfactorily, and if you have occasion to convince any doubting Thomases as to the attitude of this organization, you are privileged to use this communication in any manner that seems appropriate to you.

Yours very truly,

J. D. A. MORROW,  
"Vice-President."

---

COLONEL BARNEY, IN CHARGE of army fuel purchases, has written about 3,500 anthracite and bituminous coal producers asking if they desire to bid on coal for the army for the year beginning July 1 next.

## Classified Directory of Coal Shippers

**W**ITH the growth of the Tidewater Coal Exchange, Inc., and the refinements of classification now under way, more than 60 per cent of the trade buys, quotes and sells by pool number rather than by point of origin. To facilitate inquiries the various sources of supply have been tabulated by one of the large wholesale firms as follows:

### HANDLING ALL POOLS

Frame, Friend & Stinemann	Alden Coal Mining Co.
Fred R. Rohl, Inc.	Atlas Fuel Corporation
Blair Park Coal Co.	Eyre Fuel Co.
Smokeless Fuel Co.	Wright & Gibson Co.
Dexter & Carpenter	Hartwell & Lester
Andrade-Eyre, Inc.	Columbia Coal Mining Co.
W. A. Marshall & Co.	McCann-Camp Co.
Pullman & Stevens	International Fuel & Iron Co.
Robinson & Haydon	International Fuel Corporation
Industrial Coal & Coke Co.	

### SHIPPING OUTSIDE THE POOLS

Piedmont & Georges Creek Coal Co.	Henriette Coal Mining Co.
Pocahontas Fuel Co.	Porto Rico Coal Co.
Pennsylvania Coal & Coke Co.	Morrisdale Coal Co.
John Wills	Consolidation Coal Co.
Pittsburgh Coal Co.	General Coal Co.
Central Iron & Coal Co.	Stinemann Coal & Coke Co.
C. G. Blake Co.	Carl Coal Co.
North River Coal & Wharf Co.	Portage Smokeless Coal Co.
Sterling Coal Co.	Duncan Spangler Coal Co.

### SPECIALIZING IN SMITHING COAL

Pennsylvania Smithing Coal Co.	Beccaria Coal & Coke Co.
Pennsylvania Collieries Co.	

### HANDLING ANTHRACITE ONLY

Clarence B. Sturgis	Williams & Peters
Lehigh & Wilkes-Barre Coal Co.	Dickson & Eddy
Pinehill Coal Co.	Lee Coal Co.

### SPECIALIZING IN LOW-VOLATILE COAL

Crescent Fuel Co.	Pools 9, 10
Coalmont-Moshannon Coal Co.	Pools 10, 11, 71
Shoemaker Coal Mining Co.	Pools 9, 10, 11, 18, 71
Wright Gibson Co.	Pool 71
George D. Harris & Co.	Pool 11
W. A. Marshall & Co.	Pools 9, 10, 11, 71
Seiler Coal Co.	All low-volatile pools
Brothers Valley Coal Co.	Pool 10
Bulah Coal Mining Co.	Pools 9, 10, 15
Majestic Coal Co.	Pools 1, 9, 10, 71
Altoona Coal & Coke Co.	Pool 10
Madeira Hill & Co.	Pools 1, 10, 11
John A. Miller.	Pool 14
Duncan Spangler Coal Co.	Pool 9

Dickerman & Englis	Pools 9, 10
Alden Coal Mining Co.	Pools 9, 10
Ches. & Ohio Coal & Coke Co.	Pool 1
Imperial Coal Corp.	Pools 1, 4, 9, 10, 11, 18, 71
E. Russell Norton	Pools 1, 9, 10, 11, 71
Spring Coal Co.	Pools 4, 9, 10
Empire Coal Mining Co.	Pools 4, 10
Harry A. Freeman	Pools 1, 2, 9, 10, 11
Debevoise Anderson Co.	Pools 10, 11, 14
Thorne Neal & Co.	Pool 9
J. W. Lowe & Co.	Pools 1, 2
Watkins Coal Co.	Pool 10
Haddock Fuel Corporation	Pools 9, 10
Gavin Rowe	Pools 1, 9, 71
Cosgrove & Wynkoop Coal Co.	Pools 1, 2, 9, 10, 11
Emmons Coal Mining Co.	Pools 9, 10, 11, 14

### SPECIALIZING IN HIGH-VOLATILE COAL

Producers Fuel Co.	Pools 30, 31, 60, 61, 37, 38, 33, 34, 53, 54, 63, 64
M. A. Hanna & Co.	Pools 5, 6, 7, 41, 43
Jamison Coal & Coke Co.	Pools 33, 34, 35, 37, 38, 39, 40, 53, 54, 63, 64
Franklin Coal & Coke Co.	All high-volatile pools
Slattery Brothers	Pool 64

### SPECIALIZING IN CERTAIN POOLS, BOTH HIGH AND LOW VOLATILE

Wm. C. Atwater & Co.	Pools 1, 2, 3, 5, 6, 7, 41, 43, 44, 53, 54, 63, 64
Borden & Lovell	Pools 1, 2, 5, 6, 7, 8, 41, 43
W. K. Althouse & Co.	Pools 9, 10, 11, 18, 71, 30, 31, 33, 34, 44, 60, 61
Cortright Coal Co.	Pool 10, 34
Interstate Coal & Dock Co.	Pools 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 30, 31, 33, 34, 42, 44, 53, 54, 63, 64
Madeira Hill & Co.	Pools 1, 10, 11, 18, 33, 34, 35
Bertha Coal Co.	Pools 11, 14, 30, 31, 32, 33, 34, 35, 37, 38, 53, 54, 60, 61, 62, 63, 64
John F. Murray	Pools 9, 10, 11, 34, 71
Phoenix Coal Co.	Pools 10, 11, 30, 31, 32
Pan Handle Coal Co.	Pools 1, 2, 4, 5, 6, 7, 9, 10, 11, 30, 31, 60, 61, 71
Old Colony Smokeless Coal Co.	Pools 1, 2, 4, 5, 6, 7
Hillman Coal & Coke Co.	Pools 9, 71, 30, 31, 32, 33, 34, 35, 53, 54, 60, 61, 63, 64
Davis Coal Co.	Pools 11, 63, 64
Weston Dodson & Co., Inc.	Pools 1, 2, 3, 7, 9, 10, 30, 31, 33, 34, 35, 53, 54, 60, 61, 63, 64
Geo. E. Warren Co.	Pools 1, 9, 10, 71, 33, 34, 40, 53, 54, 63, 64
W. H. Bradford & Co.	Pools 9, 10, 11, 18, 71, 33, 34, 35, 44, 53, 54, 63, 64
Hasler & Co.	Pools 1, 2, 5, 6, 7
Campbell, Peacock & Kinzer, Inc.	Pools 1, 4, 9, 10, 11, 71, 30, 31, 33, 34, 35, 53, 54, 60, 61, 63, 64
W. C. Mason & Co.	Pools 1, 9, 10, 71, 30, 60
Valley Camp Coal Co.	Pools 5, 6, 7, 30, 31, 33, 34, 35, 37, 38, 44, 53, 54, 60, 61, 63, 64
Island Creek Coal Co.	Pools 5, 6, 7, 32, 35, 41, 43
A. A. Zane & Co.	Pools 9, 10, 30, 34, 60

### SPECIALIZING IN BUNKERING Willard Sutherland & Co., Eyre Fuel Co.

men returned to work on Saturday, Jan. 29, instead of on the day preceding, fearing disaster or misfortune if work were resumed on Friday.

The Barnum colliery union men on Jan. 26 definitely broke with the insurgents' general grievance committee and refused to contribute to Rinaldo Capallini's salary. James A. Joyce recommended working for adjustment through Board Member Daniel McHugh of District No. 1.

### Federal Regulation of Coal Industry Recommended by Judge McGee

STRICT government regulation of coal production, distribution and sale is recommended in a report issued by Judge John F. McGee, Fuel Commissioner for Minnesota, whose charges against mine owners at a recent hearing in Washington brought a hot reply from J. D. A. Morrow, vice-president of the National Coal Association.

In his latest report Judge McGee denounces as false the statements made by Mr. Morrow. Besides governmental regulation of coal production, distribution and sale, Judge McGee urges that coal producers be required to sell to individuals and organizations on the same basis as to coal dealers; that more than one reconsignment of coal be prohibited, and that one be from dealer to consumer; that a standard contract for coal sales be prescribed and that producers be prohibited from contracting to deliver greater tonnage from mines than was actually produced in the preceding year, except with government permission.

The "plunder" of the coal operators during the last year, says the report, equaled more than 10 per cent of the amount it cost the United States to carry on war for two years. He charges that the operators deliberately cut down shipments to the Northwest in order that they might reap dazzling profits on the seaboard for coal for export.

### Hustlers Join Union; Butler Mine Resumes

AFTER a week's idleness to obtain the discharge of the "hustlers," who had assisted the subcontractors to get a full day's work out of their men in the days before subcontracting was ended at the Pennsylvania Coal Co.'s mines, the men of Butler colliery agreed to return to work Jan. 27, the hustlers having been allowed to join the union. About 1,600 men had taken part in the shutdown. The

# The Weather Vane of Industry

News Notes Chronicling the Trend of Industrial Activities on Which Depends the Immediate and Future Market for Coal

**I**N DISCUSSING the recent period of deflation, which he described as a "silent panic," Colonel Leonard P. Ayres, vice president of the Cleveland Trust Co., speaking at the tenth annual convention of the National Retail Dry Goods Association, told the members of the retail dry goods trade that they should not be discouraged by the outlook. He was confident that the worst conditions had been passed, and that, while prices might be expected to continue their decline for a long period, economic and industrial readjustment was taking place, and perhaps in another twelve or fourteen months we would be approaching a period of stability.

Colonel Ayres showed that following the Civil War, when prices reached practically the same peak attained in the World War, there was a thirty-year period of decline. This was followed by a twenty-five-year period of rises in the prices of wholesale and retail commodities as well as the wages of labor and the prices of stocks and bonds.

"The chances are," said Colonel Ayres, "that we are going through the same kind of period that our fathers went through. What we are going through and are still in is a silent panic. We have not thought of it in the terms of other panics but genuinely panic prices were reached in stocks, which fell to their lowest point on Dec. 22 last. There is now an upward trend in the prices of stocks and bonds. That we have been able to pass through this crisis without more serious consequences is due to the stability of our financial system."

## Improved Steel Demand Expected

"Indications are that iron and steel making will be gradually receding for the next few weeks," the market summary of the *Iron Age* of Feb. 17 states, "but the general conditions are looked on with favor as hastening the determination of the basis from which a healthy normal demand will spring. The time element required for complete readjustment stands in opposition to any artificial stimulus. Plant operations in the Chicago district have undergone no marked change. In the Pittsburgh district a 20 per cent operation covers the situation with many of the independent mills and the Steel Corporation has lost ground. The Carnegie Steel Co. has withdrawn the blast from two furnaces, now having 45 in operation. Actual steel making capacity is down to 80 per cent, a drop of approximately 10 per cent from the gait of a week ago, and finishing capacity is not over 80 per cent. Two of the largest independent mills are operating at a 25 per cent rate, others are active mainly in making pipe and not over 15 per cent of the independent sheet mill capacity is in operation. The lead-

ing interest has dropped off 5 per cent to a 70 per cent basis in sheets and to a 70 per cent from an 80 per cent basis in tin plates. The Steel Corporation as a whole is operating at about an 80 per cent rate."

## Silk Mill Operatives Strike

Two hundred employees of the Leeds plant of the Nonatuck silk mills at Northampton, Mass., went on strike Feb. 16 rather than accept a wage cut of 15 per cent, announced Feb. 11.

## Woolen Mill Runs, After Shutdown

The 250 employees of the Dunham Mills, Inc., Naugatuck, Conn., makers of woolen knitted goods, were gratified when the carding and spinning departments resumed Feb. 14, on full time. The entire plant, after two months' idleness, is expected to be running within another week.

## Columbus Steel Plant Closes

The Columbus plant of the Carnegie Steel Co., employing 850 men, closed down for an indefinite period on Feb. 19, according to announcement made by the company.

## Metal Workers Return to Work

One-third of the 3,000 workers normally employed in the inside metal and bronze industry in New York City returned to work on Tuesday, Feb. 15, upon "open-shop" conditions, according to the reports of the more than 100 factories of the Allied Building Metal Industries. Some of the shops have actually turned away men because their ranks had been filled. The opening of the plants, after a lockout of several weeks, was accomplished without any disturbance of consequence, according to Albert S. Richey, of the Richey, Brown & Donald Iron Works, Maspeth, Queens, who gave a summary of the reports from the various individual plants.

## N. Y. Central Lays Off 3,600 More

Four repair shops of the New York Central Railroad, employing about 3,600 men, closed temporarily Saturday, Feb. 19. The location of the shops and the number of men each employs follow: West Albany, N. Y., 1,200; Elkhart, Ind., 700; Collinwood, Ohio, 900, and Depew, N. Y., 800. On Jan. 19, 900 workers of the car department at West Albany were laid off "until further notice." None of these has returned to work.

## \$500,000 Silk Mill for Virginia

Silk manufacture in Covington, Va., is planned by a \$500,000 corporation, which has been chartered by New Jersey and Virginia mill men. The Southern Textile Co. is the name of the new enterprise and its officers include H. Ruegg, president, Weehawken, N. J., and W. C. Faulkner, Richmond, Va., secretary.

## New Haven R.R. to Expand

More than \$2,000,000 will be spent by the New Haven R.R. to enlarge its line in Providence, R. I., from the Auburn freight yard to the Union Station to a six-track system and the line from the Union Station to the Northup Ave. freight yard to a seven-track system. The plan will involve tearing out sixteen bridges and building much larger ones in their places at an estimated cost of \$1,000,000. The land which must be bought for the extra tracks will cost, it is said, at least \$250,000 more.

## Pennsylvania Cement Mills Resume

Work was resumed Thursday, Feb. 17, at the Fogelsville and West Copley mills of the Lehigh Portland Cement Co., near Allentown, Pa. The eight hundred men are working full time at wages fixed Jan. 1. According to an announcement made when the mills reopened, the armrod plant of the company was to resume this week.

## Anthracite Shipments in January Curtailed By Holidays and Strike

**S**HIPMENTS of anthracite in January, as reported to the Anthracite Bureau of Information, amounted to 5,740,538 gross tons, compared with 6,436,320 tons in December, 1920, a decrease of 695,782 tons. There were twenty-five working days, but three of these were observed as religious holidays in some parts of the region, and a strike in the Panther Creek Valley helped reduce the total output. The month's total was nevertheless almost equal to that of November, 1920, 5,765,347 tons, and was slightly in excess of the record for January, 1920, when 5,713,319 tons were shipped. Shipments by originating carriers were:

	January 1921	December 1920
Philadelphia & Reading.....	1,172,873	1,324,004
Lehigh Valley.....	1,058,127	1,161,305
Jersey Central.....	470,704	497,735
Lackawanna.....	910,260	940,515
Delaware & Hudson.....	814,491	896,475
Pennsylvania.....	451,879	457,242
Eric.....	606,602	675,979
New York, Ontario & Western.....	156,564	164,557
Lehigh & New England.....	99,038	318,508
Totals.....	<b>5,740,538</b>	<b>6,436,320</b>

## Chemical Classification to Supplant Visual Inspection at Sewalls Point

**A**RANGEMENTS are being made by the Virginian Ry. to revise its methods of classifying coal at the Sewalls Point Coal Exchange and to establish a definite chemical standard for the various grades of fuel shipped through the exchange. Chemical classification will supplant the present method of visual inspection and the company believes it will result in great benefit to the coal trade by assuring standards of quality to purchasers.

A complete survey of the mine products shipped through the exchange recently has been completed and this will form the basis of a definition of "pool members" in terms of thermal units and other chemical measures. The company is erecting a chemical sampling plant at the Sewalls Point coal pier to make it possible to sample the coal there at regular intervals to determine whether or not it is measuring up to chemical requirements. Present prospects are that this plant will be in full operation by the latter part of March. It is expected, also, that the Norfolk & Western Ry. will establish a similar innovation at its Lamberts Point coal piers, a movement to this end being already on foot.

## Representative Slemp Says Army Should Pay Not More Than \$2.50 for Bituminous

**I**N testimony before the House Appropriations Committee on the army appropriation bill for the coming fiscal year, Quartermaster General Rogers said the coal estimate was based on an increase of 125 per cent on bituminous and 25.5 per cent on anthracite coal, or on a basis of \$7.70 per ton for bituminous and \$8.225 for anthracite, as compared with \$3.42 and \$6.50 respectively last year. When the estimates were submitted last December they were based on \$13 for anthracite and \$8.75 for bituminous, but the revised estimate had cut the total by slightly over two and a half million dollars.

Representative Anthony, of Kansas, in charge of framing the bill, said Senator Calder had suggested legislation to permit the army to contract for coal in advance of the appropriation, which General Rogers favored, as it would permit the army to make contracts at the same time as commercial interests. Senator Calder's letter to Representative Anthony declared the War Department had lost six million dollars on coal purchases last year, due to the high prices.

Colonel Hannay of the army estimated that the army next year would require 1,435,000 tons of bituminous and 300,000 tons of anthracite. Representative Slemp, of Virginia, said that coal was now selling at from \$2 to \$2.50 at the mines and that the estimate should be based on not exceeding the latter amount on bituminous and that the anthracite esti-

mate should be reduced by two million dollars. Colonel Hannay said the army had procured coal cheaper last year by open market purchases than it could have done under contract, but Mr. Slemp said that was not borne out by the testimony before the Calder committee.

## Hoover Appoints a Committee to Study Elimination of Industrial Waste

**A**TWO-DAY conclave of engineers and technologists from all sections of the country began in Syracuse, N. Y., Feb. 14, with the announcement by Herbert Hoover, president of the American Engineering Council of the Federated American Engineering Societies, of the appointment of a committee on elimination of waste in industry. The appointment of this committee, according to Mr. Hoover, marks the beginning of what is officially styled by this council as a great national assay of waste, in which from 100,000 to 200,000 engineers functioning through the council will attempt by studying the nation as a single industrial organism to locate the weaknesses in the country's production system.

A preliminary survey, it is announced, has already been organized and the different elements making for production waste, such as labor conflict, decrease in individual productivity, lack of co-ordination, and many other sources of industrial failure will be brought under the close scrutiny of the organized engineers of the nation with the aim of solving pressing economic problems.

The personnel of this committee is as follows: J. Parke Channing, New York City; Dr. Ira N. Hollis, Worcester, Mass.; L. W. Wallace, of Baltimore; H. R. V. Scheel, Passaic, N. J.; L. P. Alford, New York; George D. Babcock, Peoria, Ill.; F. G. Coburn, Bethlehem Shipbuilding Co.; Morris L. Cooke, Philadelphia; Harrington Emerson, New York City; C. E. Knoepfle, New York City; Robert Linton, Montana; Fred J. Miller, J. H. Williams, New York City, and Robert B. Wolf, New York.

Mr. Hoover, who is president of the American Engineering Council, also is a member of the committee, of which he is one of the principal sponsors. He will take a leading part in the assay of waste which the committee will conduct for the council. The committee, it was announced, has already started work, and a nation-wide plan, described as the most ambitious movement in the direction of solving economic problems ever undertaken by American engineers, will be put in operation from New York and Washington headquarters of the council at once.

At the meeting of the Executive Board Lawrence Wilkeson Wallace was elected permanent secretary, succeeding L. P. Alford, of New York, who had been acting secretary since the formation of the council.

The council gave formal approval to the action of the Committee on Procedure requesting that President Harding put an engineer on the Interstate Commerce Commission. The Procedure Committee was authorized to name six qualified engineers when requested to do so. Activity in behalf of a National Department of Public Works will be continued by the council through the Public Affairs Committee. It was recommended that engineering efforts be extended to the whole question of government reorganization planned under a special congressional committee.

The plan for the registration of engineers as presented in the council's report was endorsed and the appointment of another committee was authorized. The Russian Affairs Committee was made a new committee on International Relations, the personnel of the old committee being retained.

An invitation from Philadelphia engineers to hold the April meeting in that city was accepted. The June meeting will be held in St. Louis.

The council decided to recommend to President Harding that an engineer be appointed assistant Secretary of War. No action was taken relative to the National Civic Federation, Fuel Conservation, or Merchant Marine Committee appointments. The Committee on Public Affairs was authorized to recommend a congressional appropriation to investigate deeper waterways—St. Lawrence project.

## Reading Dissolution Plan Announced

A PLAN for the segregation of the properties of the Reading Co. was announced in Philadelphia Monday, Feb. 14. The stockholders will be called upon to make small cash payment for stock in the new company which will be formed if practicable. The plan submitted to the court provides in part for the Reading Co. assuming the \$96,000,000 general mortgage bonds now outstanding. The Reading Coal Co. will be called upon to pay the Reading company \$10,000,000 cash and \$25,000,000 bonds of the coal company. It is also suggested that the Reading Co. merge the Philadelphia & Reading under the present charter and subject the railroad property to a direct lien of the general mortgage.

If practicable, the coal company will consolidate with the Delaware Coal Co., of which it owns the entire capital stock. The consolidated company will then issue capital stock, of no par value, to the Reading Co. If that is not practicable, a new corporation will be formed to acquire the coal company stock from the Reading Co., and such new corporation will issue no-par-value stock to the extent of 1,400,000 shares. This stock will be sold to Reading Co. stockholders share for share for \$5,600,000, or \$2 for each share of Reading Co. stock. No speedy distribution of Reading Co. assets is believed to be probable, as the financial structure of the company is so interlaced that it will require some time to unravel it.

## International Commerce Board to Study Rehabilitation of World Trade

"THE RESTORATION of the World's Commerce" will be the general subject taken up at the first annual meeting of the International Chamber of Commerce in London during the week beginning June 27. Announcing the subject and the date, the American Section of the International Chamber let it be known that a large American attendance is looked for.

Arrangements are being made for a program of general sessions and group meetings to discuss international economic problems in the fields of finance, ocean and land transportation, communication, production and distribution, and restoration of the devastated areas. All of these topics will be approached with a view to relating them to the central theme.

The International Chamber was organized at Paris last year by representatives from Belgium, France, Great Britain, Italy and the United States. Preparation is now well advanced for participation of a number of other countries in the organization. The American Section has been organized for some time with offices at the headquarters of the Chamber of Commerce of the United States, in Washington.

## No Price Fixing for Coal in Wyoming

A BILL offered in the Wyoming House of Representatives by Pratt and Brewer, providing for a special commission to investigate and fix coal prices at mines and retail houses in Wyoming, was voted down after a lengthy debate, although the measure was said to have the approval of Governor Carey.

Opponents of the bill asserted that the establishment of such a commission would serve to increase the price to the consumer, rather than decrease it. The defeat of this bill means that it will be two years before the question comes up again before the legislature.

## New England Rate Hearing on March 3 To Be Held in Boston

FURTHER hearing on readjustments of rates on anthracite coal from anthracite fields in Pennsylvania and of rates on bituminous coal from origin points in Pennsylvania, West Virginia, Maryland and Ohio to points on the Boston & Maine R.R., Boston & Albany R.R., New York, New Haven & Hartford R.R., Maine Central R.R., Bangor

& Aroostook R.R. and Central Vermont Ry., which had been scheduled for Thursday, March 3, 1921, in room 401-C, 143 Liberty Street, New York City, as announced in *Coal Age*, Feb. 17, p. 331, has been transferred to the Chamber of Commerce (third floor), 177 Milk Street, Boston, Mass., beginning promptly at 10 a.m., Thursday, March 3.

## Seventh Trade Commission Coal-Cost Report Covers Trans-Mississippi States

COMPLETING the series of coal-cost bulletins the Federal Trade Commission has published the seventh report covering operations in 1918 in Iowa, Kansas, Missouri, Arkansas, Oklahoma, Texas, Colorado, New Mexico, Montana, Wyoming, Utah, Washington and North Dakota.

The data set forth cover the operations of 394 operators who mined about 61,000,000 net tons from 628 mines, and for the years 1916 and 1917 the operations of 27 operators who mined about 4,600,000 net tons annually.

The costs and sales realization are shown for each quarter of 1918 and the year as a whole for each of the twenty-seven producing districts in the thirteen principal coal-producing trans-Mississippi states. The producing districts are those defined by the U. S. Fuel Administration in various price-fixing orders. All operators fully reported are shown in the tables contained in the report, and they produced about 92 per cent of the output for Iowa in 1918, 88 per cent of that for Kansas, 74 per cent of that for Missouri, 74 per cent of that for Arkansas, 87 per cent of that for Oklahoma, 48 per cent of that for Texas, 94 per cent of that for Colorado, 97 per cent of that for New Mexico, 95 per cent of that for Montana, 95 per cent of that for Wyoming, 95 per cent of that for Utah; 90 per cent of that for Washington, and 54 per cent of that for North Dakota.

For the production of about 61,000,000 tons, as shown in the tables mentioned, the average annual total f.o.b. mine costs ranged by districts from \$1.08 to \$4.45, and the average sales realization was \$1.36 to \$4.66 per ton.

Returns were received also for a shorter period than twelve months from 112 operators in the various districts, who had an estimated total annual production of about 5,500,000 tons. Examination of such returns shows that had it been possible to obtain reports for the whole twelve months, the annual averages shown in the foregoing table would not be changed more than 1 or 2c. per ton, if at all. Including these mines, the production fully or partly reported covered about 94 per cent of the total 1918 output of the thirteen States.

The labor costs in 1918 in the districts covered are from 39 to 53 per cent higher, and the total f.o.b. mine costs in 1918 were from 42 to 48 per cent higher than those in 1916. The sales realizations in 1918 were from 46 to 69 per cent higher than those in 1916.

Of the amount paid for coal by the purchaser, based on each dollar of sales realization during 1916-1918, the item of most general interest is the proportion which labor received. That part of the amount paid by the purchaser which went to labor varied considerably from district to district, and in most districts from period to period. It was highest (88c. out of each dollar) in both Oklahoma districts during September, 1917, and in the eastern district of Oklahoma in November, 1917, and lowest (58c. out of each dollar) in Montana during the period January-March, 1917.

A comparison of the rate of production per month and margins per ton for three periods during 1917-18, shown in other tables, tends to show that in some instances an increase in production does not necessarily accompany an increase of margin, nor does a decrease in margin necessarily involve a decrease in production. The foregoing facts indicate clearly that the margin is but one of the several factors which may stimulate or retard production. Production was influenced also by such conditions as strikes or other forms of labor shortage, transportation facilities, and the demand for coal in the markets available to the mines, etc. Explanations for the rise or fall of production are to be found in the particular conditions which existed during each period in each district.

## Coal Control Bill Will Not Pass Congress by March 4; To Continue Efforts at Regulation at Extra Session

BY PAUL WOOTON  
Washington Correspondent

**R**EGARDLESS of the changes which may be made in the Calder coal bill, no hope now is entertained by friends of the measure for its passage at this session of Congress. Had the fact-finding feature of the bill alone been retained and had it been reported earlier to the Senate, such a bill probably could have been passed. Senator La Follette declines to comment as to his plans but it is believed that an attempt is being made to report out a bill. If a majority of the committee cannot agree upon amendments to the Calder bill, it is expected that the Calder bill will be re-introduced embodying fundamental changes.

It is quite evident that the effort to regulate the coal industry has gained strength and that it will be continued at the extra session of Congress. Some form of regulation for the coal industry is expected to be the ultimate outcome of the agitation at this session of Congress. Thus, what was a cloud no larger than a man's hand now fills the whole sky, as one coal operator phrased it.

It is generally admitted that the chances favor a venture on the part of Congress into the field of federal regulation of private industry. That coal has been selected for the experiment cannot be doubted. That this type of activity on the part of the Federal Government is a departure and would set a precedent for the control of other essentials is pointed out. Regulation of the railroads is not comparable, it is asserted, as the railroads produce no new wealth. They simply sell transportation. It is admitted generally that a long fight is in prospect, but it is believed that in the end Congress will approve of some form of regulation.

### SUGGESTS AMENDMENTS AND NEW SECTIONS

Just how hastily conceived the Calder bill must have been is indicated by the material way in which W. P. Chantland proposes to amend the original measure. Appearing before the La Follette committee on Feb. 15, he submitted a number of amendments and suggested several new sections for the bill. One of his new sections is intended practically to re-enact Section 4 of the Lever Act. It reads:

"That it is hereby made unlawful for any person or corporation to charge an unjust or unreasonable or excessive price for coal, or to make any unjust or unreasonable rate or charge in handling or dealing in or with coal, or to prevent, limit, or lessen the production of coal in order to enhance the price thereof, or to conspire, combine, agree or arrange with any other person or corporation, or both, (a) to limit the facilities for producing, transporting, supplying, storing or dealing in coal; (b) to restrict the supply of coal; (c) to restrict the direct and expeditious distribution of coal to the consumers; (d) to prevent, limit, or lessen the production of coal in order to enhance the price thereof; (e) to exact unjust or unreasonable or excessive prices, or charges, or margins for coal, or to aid and abet the doing of any act made unlawful by this section."

"The reports made by the commission in the performance of its duties as described in Section 4 of this act shall be competent evidence so far as they relate to any prosecution brought under this section, and the findings and facts therein contained shall be *prima facie* evidence of the conclusions of fact and the facts therein stated.

"Any person violating any of the provisions of this section shall, upon conviction, be fined not exceeding \$5,000 or be imprisoned for not more than two years, or both."

Another new section proposed is as follows:

"That it shall be unlawful for any person or corporation to sell or offer to sell spot coal or to deal in options in spot coal, for shipment in commerce, whenever such person or corporation shall be delinquent more than ten days in shipment, on demand, or requirement, under contract.

"Upon conviction any person or corporation found guilty of such offense shall be fined not to exceed \$1,000 for the first offense and may be imprisoned in a penitentiary not

to exceed two years, and for each subsequent offense the fine shall be \$5,000 or imprisonment not exceeding five years, or both."

When Mr. Chantland finished reading the above, Senator Reed said, "Let us suppose a big corporation has a contract for 500,000 tons of coal. Suppose this corporation is a hog and, seeing that there is a shortage of coal, proceeds to demand shipment, as it has the right to do under its contracts. In the meantime it has developed that there is a genuine shortage of coal in the country. Householders are freezing. Factories are being compelled to shut down. It is entirely practicable to take a part of this coal and deliver it for the purpose of relieving these emergencies. It would still be possible to deliver on the contracts the coal necessary to keep the contractors' plants running, but this provision would absolutely prevent that. This suggestion came to me in just one and one-half seconds after I heard the language proposed. I think it illustrates the necessity that it is well to give these matters at least two minutes consideration."

### WOULD GIVE PRESIDENT CONTROL IN EMERGENCY

Mr. Chantland proposed the following addition to Section 12 of the Calder bill:

"Whenever, in any emergency threatening, or which has arisen out of an industrial dispute between operators and miners, the President determines in the exercise of the powers herein granted to take over the operation of any mines, he shall include as a part of his order for such taking over, provisions (1) for just compensation for the use of the mining properties taken over and (2) for the payment during such emergency control of a fair living wage to the mine workers, based on a maximum eight-hour day, commensurate with proper and just American standards of living, which provision shall obtain only until the termination of his exercise of such powers as stated or until the settlement of the dispute, whichever event first occurs, but the President shall not use the powers granted herein either to force a settlement of such industrial dispute between operators and miners or to deprive the mine workers in any manner of any power of collective bargaining, through such representatives as they may choose, with the operators relating to such dispute."

The addition to Section 12 suggested by Samuel Gompers reads as follows:

"Provided that nothing in this act shall be construed as to apply to trade unions or other labor organizations instituted for the purpose of regulating wages, hours of labor and other conditions under which labor is performed."

To eradicate the possible danger of a mandamus being directed against labor organizations, Mr. Chantland suggested that "person or corporation" in Section 7 be struck out and the words "operator or dealer" be inserted. At the end of the paragraph he suggests that the following phrase be added at the end of the paragraph: "relating to the production of records or information."

In the light of the discussions before the committee as to Section 14 of the bill, Mr. Chantland said that it would seem that the question well might come up as to whether the 90 per cent of the amounts charged above a certain amount should not be made 100 per cent, so as to stop it definitely at a point. A lot of little companies would be set up, he said, and he suggested the following in place of the proviso at the end of Section 14: "The taxes herein levied shall apply to all transactions in coal whether sales, contracts of sales, or options to purchase, where the coal is not physically handled by the seller, and shall not apply to those transactions in coal where the coal is physically handled by the seller."

Senator Reed asked what would become of the wholesale dealer who is obliged to send out agents at great expense.

to canvass the trade, but who does not actually have the coal hauled into his yard and re-handled. Mr. Chantland said the question that the committee will have to determine is how necessary that function is. Continuing, he said:

"I think attention should be called to the testimony of Dr. Wing as to this matter. It may be—if it is possible to put it in legislation, and of course it is probably most difficult and dangerous to fix a stated price for services in legislation—that there may have to be discrimination or an addition to cover that point, if it is conceived that there is a proper or useful function in distribution, or necessary function in distribution. The function of distribution is vastly different in the sparsely-settled sections than in the big congested Eastern centers. Mr. Wing told you that they would have liked to make two rates to take care of that matter, but the order from the President was that there should be but one rate."

George H. Cushing, managing director of the American Wholesale Coal Association, was asked for the names of government and railroad officials who he charged had profiteered in coal last year. Mr. Cushing said his memory was not clear as to the names, but mentioned H. W. Smith as having approached him to procure 450,000 tons of coal for export to South America, Smith having said he had friends interested with him in the State, Treasury and Labor departments and the Shipping Board, and that \$1 a ton margin would be divided among those arranging the exportation of the coal. Mr. Cushing said he knew none of the names of people in the departments mentioned. As to railroad officials Mr. Cushing said the names were given him by members of his association whose coal had been involved in confiscation of coal by roads, but he said he would have to ask these members for the names of railroad officials, which he would furnish the committee later.

#### DEPARTMENT IRREGULARITIES PROVE TO BE "BLUE SKY"

H. W. Smith said he was from Elmira, and during the war had distributed Liberty Loan posters to coal operators and also aided the employment service of the Labor Department. Years ago he had been in the coal-mining business at Blossburg, Pa., and his son was now interested in the coal business in Elmira. He had conceived a plan of selling about 200,000 tons of coal to Brazil and Chile and saw Mr. Cushing many times in an effort to get the coal, but did not mention \$1 a ton as margin. He had mentioned that he had friends in various departments who were interested in the plan, but testified that he had not sold a pound of coal. "So it's all blue sky," said Senator Kenyon.

Henry T. De Bardeleben, president of the Alabama Coal Operators' Association, telegraphed the committee protesting against the bill and asking for a hearing, but the Alabama interests were not heard.

Mr. Chantland was questioned by the committee as to the seizure of the National Coal Association records last December. He said all but a few of the records had been returned to the association, but Senator Reed intimated that there might be others in possession of the Calder committee. Mr. Chantland read a few letters taken from the association indicating activity, but Senator Reed saw nothing sinister about the correspondence or its contents. Mr. Chantland said that although a watchman had been placed in charge of the records over one night, some were missing the next day when the investigators called. Mr. Fletcher Lewis, of the National Coal Association, resented the innuendo that the association had tampered with the records while they were under investigation by the committee agents. Senator Reed thought the seizure had been illegal.

The Department of Justice is investigating the retail coal dealers' association of the District of Columbia in the light of evidence before the Manufacturers' committee charging that it had maintained prices.

**SENATOR GAY, OF LOUISIANA,** is receiving numerous communications from persons engaged in varied business activities commending his minority report (*Coal Age*, Feb. 17, page 330), which opposes government regulation of business such as is proposed in the Calder coal bill.

## Coal Deliveries at South Amboy Exceed All Records for December

DECEMBER coal deliveries by the Pennsylvania Railroad at South Amboy, N. J., which supplies 60 per cent of the needs of the subway and street car lines, and of the gas and electric light companies in New York City, broke all previous records for that month. The total amount dumped at these piers in December was 559,450 tons, which exceeded even the high record of December, 1913, by 16,244 tons.

This large delivery was made possible to some extent, of course, by the fact that weather conditions permitted practically uninterrupted service. The high tonnage record for the year 1920 was made in August, when 627,019 tons were delivered at South Amboy. Eighty-five per cent of the coal dumped at these piers is bituminous.

## Roads Must File Reparation Claims Within Year of Release of Federal Control

IN THE matter of claims by railroads for reparation the Interstate Commerce Commission advises: By Section 206 (c) of the Transportation Act complaints for reparation on account of damage claimed to have been caused by reason of the collection or enforcement by or through the President during the period of Federal control of rates, charges, classifications, regulations or practices which are unjust, unreasonable or otherwise in violation of the Interstate Commerce Act may be filed with the commission within one year after the termination of Federal control. Notification of the commission that a complaint may or will be filed later for the recovery of damages does not constitute a filing of complaint within the meaning of the statute.

Prompt action will be facilitated if each complaint for reparation be accompanied by reparation statements conforming substantially to the form prescribed by rule V of the Interstate Commerce Commission's rules of practice.

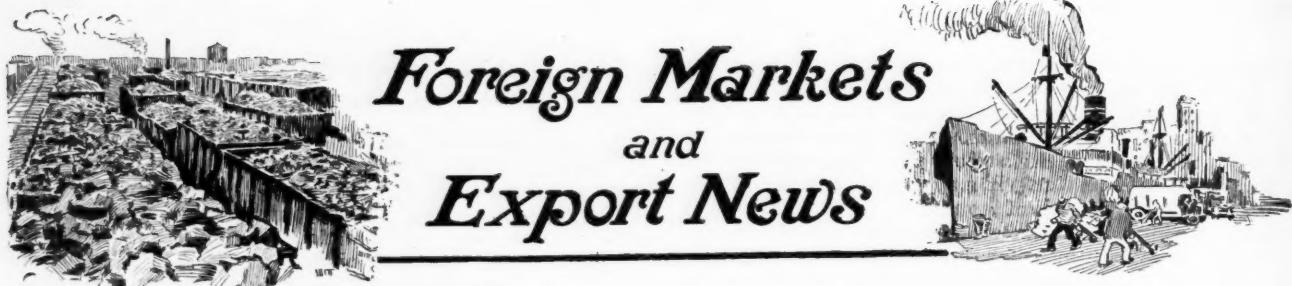
## Old N. Y. Tidewater Exchange Appoints Committee to Liquidate Accounts

AT A MEETING of the members of the old Tidewater Coal Exchange in New York City on Feb. 14 the following members, as creditors, were appointed a committee to confer with debtor members on the liquidation of outstanding pool accounts: L. J. McClum, chairman for W. H. Bradford Co.; W. F. Coale, for Coal & Co., Inc.; H. W. Fry, for Wm. Cory-Mann George Corporation; Sanford H. E. Freund, temporarily representing Consolidation Coal Co.; Major Coyle, for Weston Dodson Co.; S. S. Bruce, for Seaboard Byproduct Co.; F. G. Emmons, for Emmons Coal Mining Co.; G. M. Dexter, for Dexter & Carpenter Co.; W. H. Hopcock, for N. Y. N. H. & H. R.R., and A. D. Thompson, for Majestic Coal Co.

On April 30, 1920, when Federal control was lifted, the Tidewater Coal Exchange ceased to function and the present Tidewater Coal Exchange, Inc., was formed. At that time many pool credits and debits were outstanding, some of which have never been adjusted, and the above committee will endeavor to "clean the slate."

A BILL INTRODUCED in the House of the Indiana General Assembly Feb. 2 would establish a State Industrial Board of three members, instead of five, as now constituted, and would increase the salaries of the board members from \$4,000 to \$5,000. This bill also would transfer the jurisdiction of insurance matters from the Industrial Board to the Insurance Commission of the State. In the new bill certain work is placed in the extra-hazardous classification, among which would be coal mining or other mining. The representative who introduced the bill says it seeks to make a better law. "This bill saves the state about \$12,000 annually, and as to changing the insurance features, I feel that the Industrial Board knows nothing about insurance, and this change would be a protection to policyholders. The bill also clarifies several points that they have been going to court about."

# Foreign Markets and Export News



## Belgian Coal Output Close to Normal

Trade Commissioner Samuel H. Cross at Brussels states that the average monthly Belgian production of coal in the second half of 1920 surpassed that of the pre-war year, 1913, and furnishes the following official figures for comparison:

	Tons	August	September
Hainaut:			
Mons.	416,680	425,540	
Center.	300,735	312,480	
Charleroi.	608,635	642,450	
Namur.	51,070	53,320	
Liege.	457,950	452,200	
Limburg.	21,000	23,000	
Total.	1,856,070	1,909,050	

The average monthly production for 1913 was as follows: Mons, 364,200 tons; Center, 303,830 tons; Charleroi, 679,000 tons, and Namur, 64,420 tons. The Limburg coal basin was not producing at that period.

The recent strike in the coal mines of the Charleroi district provided the impetus for an official study of miners' wages throughout the country. Since Jan. 1, 1920, wages have been raised four times—15 per cent on April 1; 5 per cent on June 1; 5 per cent on July 4; and between 5 and 10 per cent, according to rate of pay, on Oct. 3. The index numbers for wages, based on the pay of January 1 as 100, therefore amounted to 115 in April, 120.75 in June, 126.79 in July, and 136.30 in October.

The following table shows the average daily wages of various classes of workers in the different Belgium coal basins for both January and October, 1920:

Districts	Vein Workers		Pit Workers		Surface Hands			
	Jan.	Oct.	Jan.	Oct.	Male	Female	Jan.	Oct.
	Francs	Francs	Francs	Francs	Francs	Francs	Francs	Francs
Mons.	21.80	32.99	18.95	27.88	14.70	20.79	7.51	10.21
Center.	22.33	32.17	18.81	26.75	15.91	22.82	8.61	11.53
Charleroi.	21.84	31.35	19.27	26.82	15.28	21.29	8.47	11.65
Hainaut.	21.94	32.14	19.05	27.15	15.22	21.49	8.23	11.23
Namur.	21.96	30.45	18.83	26.90	14.63	20.19	8.54	11.95
Liege.	22.46	33.79	17.25	26.79	14.36	20.99	8.17	11.55
Liege-Herve.	21.63	31.25	18.68	25.75	15.39	21.36	8.96	12.83
Limbourg.	22.15	32.05	17.52	23.95	13.30	18.49	7.70	9.64
General average	22.01	32.02	18.54	26.49	14.84	20.92	8.27	11.32

The average daily wage for all mine laborers throughout Belgium in January, 1920, figured on the basis of the data just quoted, was 15.91 francs; by October it had increased to 22.68 francs, or 41 per cent.

The colliery owners have been compensated for this increased production cost by officially authorized basic increases in the sales price of coal per ton at the mines of francs on April 1; 3 francs on June 1; 3 francs on July 1; and 4.75 francs on October 1.

## America Must Extend Long-Time Credits To Retain Foreign Customers Acquired Since War Began

In the annual report of the Federal Reserve Board Governor W. P. G. Harding informed Congress that the utmost care must be taken to conserve our credit and preserve the basis of the country's prosperity in order to avoid the extreme conditions prevailing in Europe.

"Upon the United States," the Governor declared, "the solvency and financial stability of many other countries depend. This fact greatly increases the responsibility resting upon the American banking system and calls for exercise of good judgment and strict observance of sound financial and economic principles." Restoration of the buying power of Europe can only be restored, according to Gov-

ernor Harding, if American raw materials go forward steadily over an extended period against long time credits. By means of corporations organized under the Edge act for financing foreign trade, the Governor contended, long time credits may be granted to finance exports. This operation he described as necessary for the solution of the present world problem. Financing exports to Europe through credits extended by the Government was considered by Governor Harding to be a war-time expedient.

The above remarks are especially applicable to the exporting of American coal. Foreign buyers, under the stress of intensified demand last summer waived the long-term credits formerly permitted by British exporters, until the war, the main factors in the export industry. Old conditions are fast returning, and to retain her new export outlets American shippers must be prepared to extend the same long-time credit accommodations which foreign buyers enjoy in their trading with British houses.

## Exports of Coal and Coke from the United States by Customs Districts, December, 1920

Districts	Coal		Coke Gross Tons
	Anthracite, Gross Tons	Bituminous, Gross Tons	
Maine and New Hampshire.	60	41	
Vermont.	2,114	14,854	
Massachusetts.	68		
St. Lawrence.	105,773	510,188	1,036
Rochester.	5,884	51,900	685
Buffalo.	31,777	437,653	35,593
New York.	9,695	44,209	2,363
Philadelphia.	8,361	205,946	5,490
Maryland.		257,314	10,436
Virginia.		755,711	955
South Carolina.		26,334	
Georgia.		3,831	
Florida.	6	6,773	850
Mobile.		9,375	
New Orleans.		5,218	
San Antonio.	7,395	5,989	315
El Paso.	213	25,393	6,553
San Diego.	1	26	
Arizona.		4,191	1,967
San Francisco.	2	11	5
Washington.	259	1,430	
Dakota.	749	1,408	102
Duluth and Superior.	47	2,665	62
Michigan.	27	114,661	10,374
Ohio.	10	197,418	312
Porto Rico.		176	5
Totals.	372,441	2,682,715	77,109

Districts	BUNKER COAL		Tons
	New York.	Philadelphia.	
Maryland.			358,311
Virginia.			36,662
			61,037
			219,302

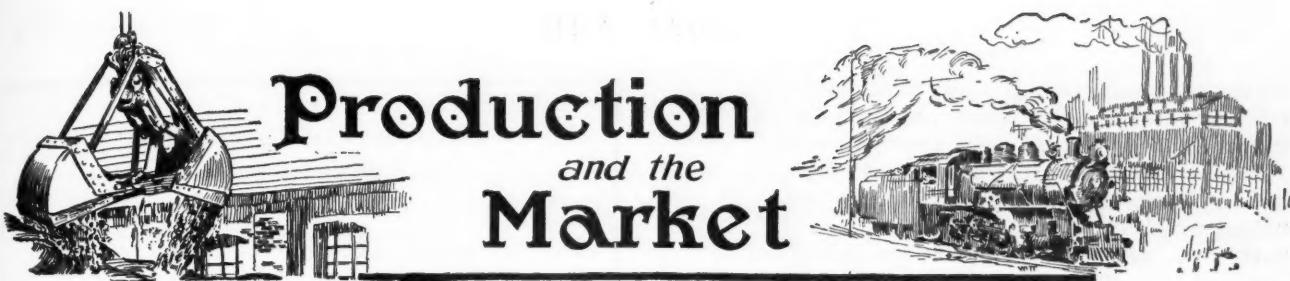
## British Output Declines, Export Quotations Show Increase

Weekly coal production in Great Britain is again declining. The output for the week ended Jan. 29 was 4,607,000 tons, more than one million tons short of the last preceding week and less, by 200,000 tons, than the output during the week ended Jan. 15.

The South Wales colliery owners are adhering to their adopted minimum, i.e., £2 19s. for the best large steamers and £1 for the best smalls. The latter, it is anticipated, will see a further decline when control ceases, while other qualities will advance.

Coal exports to the Far East are expanding. Quotations to foreign consumers are as follows:

Admiralty grades, £2 19s. to £3; smalls, £1 to £1 2s. 6d.; cargo grades, 18s. 6d. to 19s. 6d.; inferior, 16s. 6d. to 17s. 6d.



# Production and the Market

## *Weekly Review*

COAL men may be described as "marking time," awaiting the inevitable swing of the trade pendulum back to a normal market. Spot demand is demoralized. Buying for overseas is at a standstill; the business depression and recent overproduction of industrial coal have caused the market to be glutted, and the movement of soft coal to retailers has been hard hit so far by the unusually mild weather. That anthracite is no longer in urgent demand is shown by another price decline this week, "independent" domestic coal now selling around \$8.75 f.o.b. mines. Numerous cancellations of orders for this class of fuel indicate the growing adequacy of "company" shipments to meet current demand. Hard-coal production is being steadily maintained; 2,048,000 net tons is the output recorded for the week ended Feb. 12. Complete stagnation exists in the coke market. Independent steel interests are in the midst of cost reducing in an effort to stimulate business, expecting producers to make like reductions on their coke contracts which otherwise will be entirely out of line.

Interest in both spot and contract markets is very limited. While it is true that many buyers have such heavy stocks that spot purchases later in the season will be ample for their fall and winter needs, nevertheless many in the trade feel that any prolonged continuance of

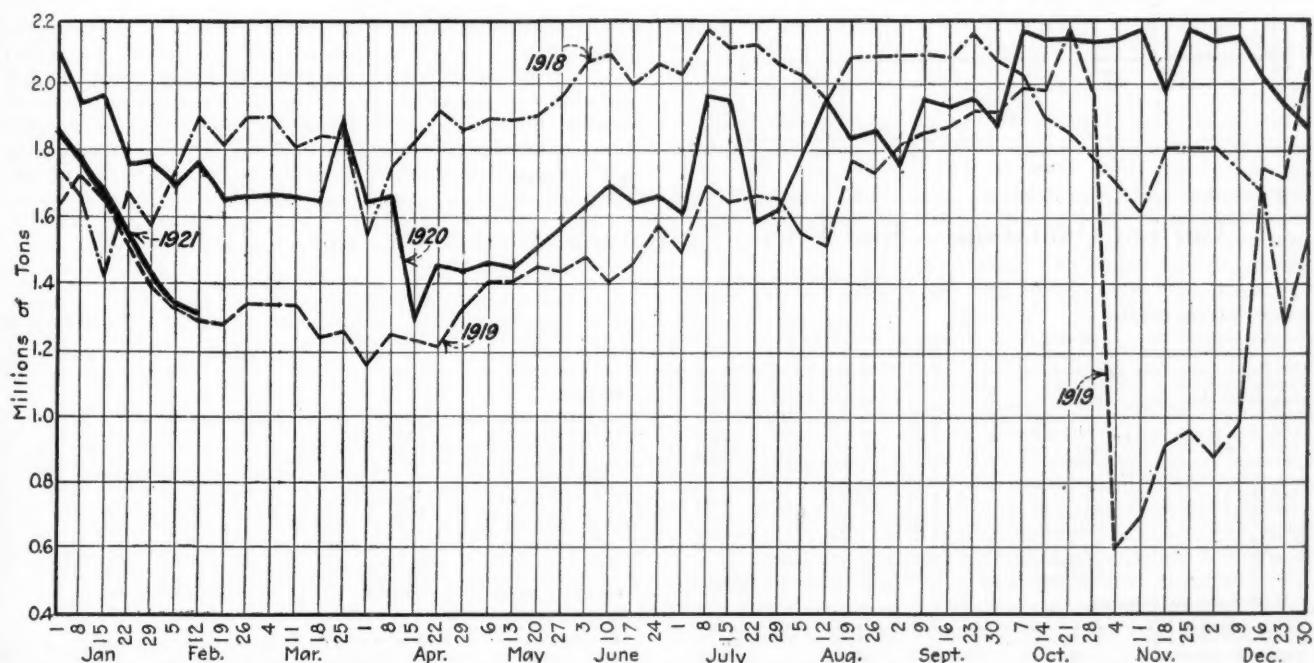
the present sluggishness is certain to be followed by a reflex, which makes it likely that this year will see a mild repetition of the strenuous times of last summer, when producers and shippers were besieged by importunate buyers. Active buying in the domestic market is now confined to current requirements. The season is too far along to necessitate stocking, and as the winter has been an exceptionally mild one, lowered consumption has materially reduced the tonnage usually moved. A few cold snaps may be in store for the retail trade, but this stimulation will hardly be felt by producers, as stocks in the hands of dealers are generally large enough to meet any sudden temporary demand.

### RAILROAD CONTRACTS CURTAILED BY LOW PRICE

Railroad fuel consumption also has been affected, due to lighter freight movements. Roads are drawing on their storage piles or are buying in limited quantities only, as their contract offers to producers, based on present low market figures, are not acceptable to the industry.

The only sign of activity in the buying market is the easy absorption of "distress" coal on its appearance. As the tonnage involved in this class of business is now quite small, many in the trade believe that this activity finally presages a renewal of buying interest. An

Daily Average Production of Bituminous Coal\*



\*From weekly report of Geological Survey.

increasing number of operators have determined to rest on their returns of last season, at least for the present, rather than sell at a loss. Production has shown a steady downward trend since early in December, 1920, and the effects are already showing in more stable mine prices, which in some instances have rallied during the past week, as shown by quotations appearing in *Coal Age*.

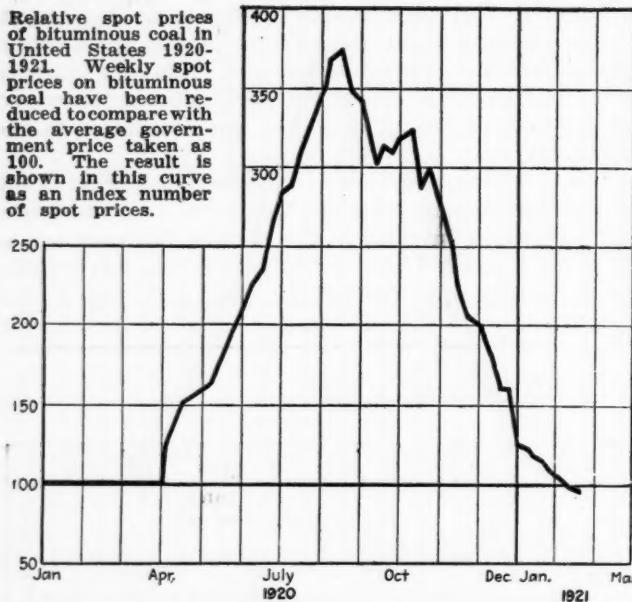
### BITUMINOUS

Soft-coal production continued its steady decline during the week ended Feb. 12. For the first time since last April the output fell below the 8,000,000-ton mark. According to the Geological Survey, 7,861,000 net tons were mined during the week. The average daily production still parallels that of the coal year 1918-19. It is expected that production will go to even lower levels during the third week in February as loadings on the first two days of that period indicate a further decline of perhaps 4 per cent.

### PRICES

*Coal Age* index of soft-coal prices declined to 98 in the week of Feb. 22, from 99 the week before, as compared with the drop of 3 points from 102 to 99 the preceding week. While little coal was sold on the spot market, this indicates a growing determination of producers to refrain from forced production and to hold tonnage against a legitimate price. The trend of the index is shown in the accompanying diagram.

Relative spot prices of bituminous coal in United States 1920-1921. Weekly spot prices on bituminous coal have been reduced to compare with the average government price taken as 100. The result is shown in this curve as an index number of spot prices.



### Current Quotations—Spot Prices, Bituminous Coal—Net Tons, F.O.B. Mines

Coal	Market Quoted	Gov't Price	Jan. 20 1921	Feb. 15 1921	Feb. 22 1921†
<b>Low-Volatile, Eastern</b>					
Pocahontas mine run.....	Columbus.....	\$2.35	\$4.75	\$3.85	\$3.50
Pocahontas lump.....	Columbus.....	2.60	6.20	6.00	6.00
Pocahontas mine run.....	Chicago.....	2.35	4.60	2.75	<b>2.50@3.50</b>
Pocahontas lump.....	Chicago.....	2.60	5.50	3.90	3.25@4.50
Pocahontas mine run.....	Boston*.....	7.00	6.15	5.75@6.25	
Pool 1.....	New York.....	2.35	4.00	3.50	3.25@3.50
Pool 1.....	Philadelphia.....	2.35	4.00	3.50	3.00@3.40
Pool 1.....	Baltimore.....	2.35	..	3.00	<b>3.00@3.25</b>
Clearfields mine run.....	Boston.....	2.95	2.85	2.60	2.15@3.00
Somersets mine run.....	Boston.....	2.95	3.60	3.15	2.50@3.75
Pool 10, 11.....	New York.....	2.95	2.75	2.50	<b>2.85</b>
Pool 10, 11.....	Baltimore.....	2.95	2.80	2.50	2.50
Pool 10, 11.....	Philadelphia.....	2.95	3.00	2.50	2.00@2.75
Pool 18.....	New York.....	2.95	2.25	2.15	2.00
Pool 18.....	Philadelphia.....	2.95	2.25	2.00	
Pool 18.....	Baltimore.....	2.95	2.25	2.00	<b>2.00@2.15</b>
<b>High-Volatile, Eastern</b>					
Pittsburgh mine run.....	Pittsburgh.....	2.35	2.50	2.40	2.20@2.50
Pittsburgh sc'd. gas.....	Pittsburgh.....	2.35	3.50	2.90	<b>2.60@2.75</b>
Kanawha mine run.....	Columbus.....	2.70	2.65	2.50	<b>2.60</b>
Kanawha lump.....	Columbus.....	2.95	5.25	3.90	3.50
Hocking mine run.....	Columbus.....	2.50	2.25	2.40	2.25
Hocking lump.....	Columbus.....	2.75	4.15	3.85	3.65
Pitts. No. 8 mine run.....	Cleveland.....	2.35	2.75	2.50	2.25@2.50

Coal	Market Quoted	Gov't Price	Jan. 20 1921	Feb. 15 1921	Feb. 22 1921†
Pitts. No. 8 lump.....	Cleveland.....	\$2.60	\$4.25	\$3.75	<b>\$3.75@4.00</b>
Pool 34 (54, 64).....	Philadelphia.....	2.50	2.25	2.10	<b>2.25</b>
Pool 34 (54, 64).....	New York.....	2.50	2.25	2.15	2.00@2.25
Pool 34 (54, 64).....	Baltimore.....	2.50	2.25	2.15	2.00@2.25
<b>Midwest</b>					
Franklin, Ill., mine run.....	Chicago.....	2.35	2.90	2.75	2.25@3.25
Franklin, Ill., lump.....	Chicago.....	2.55	4.00	3.80	3.50@4.15
Central Ill., mine run.....	Chicago.....	2.35	2.25	1.85	1.50@2.25
Central Ill., lump.....	Chicago.....	2.55	3.40	2.60	2.00@3.25
Ind. 4th Vein, mine run.....	Chicago.....	2.35	2.50	2.20	1.85@2.50
Ind. 4th Vein, lump.....	Chicago.....	2.55	3.70	2.30	2.00@4.15
Ind. 5th Vein, mine run.....	Chicago.....	2.35	2.40	2.15	1.80@2.50
Ind. 5th Vein, lump.....	Chicago.....	2.55	3.55	3.10	2.40@3.75
Standard mine run.....	St. Louis.....	2.35	1.90	1.95	1.90@2.00
Standard lump.....	St. Louis.....	2.55	3.00	2.50	<b>2.50@2.75</b>
West Ky., mine run.....	Louisville.....	2.35	2.25	2.30	2.00@2.25
West Ky., lump.....	Louisville.....	2.60	3.85	3.40	3.25
<b>South</b>					
Big Seam mine run.....	Birmingham.....	2.45	3.10	3.10	2.95@3.25
Big Seam lump.....	Birmingham.....	2.75	4.50	3.75	3.50@4.00
S. E. Ky. mine run.....	Louisville.....	3.00	2.80	2.65	<b>2.50@3.00</b>
S. E. Ky. lump.....	Louisville.....	3.25	5.25	4.40	3.75@4.25

\* Gross tons, f.o.b. vessel, Hampton Roads.

† Advance over previous week shown in **heavy type**, declines in **italics**.

### Estimates of Production

FROM THE WEEKLY REPORT OF THE GEOLOGICAL SURVEY  
(NET TONS)

### BITUMINOUS COAL

Total bituminous, including coal coked

		1920(a)		
	Week	Coal Year to Date	Week	Coal Year to Date
Jan. 29b.....	8,570,000	459,693,000	10,594,000	397,469,000
Daily average.....	1,428,000	1,800,000	1,766,000	1,550,000
Feb. 5b.....	8,126,000	467,819,000	10,010,000	407,480,000
Daily average.....	1,354,000	1,790,000	1,668,000	1,553,000
Feb. 12c.....	7,861,000	475,680,000	10,484,000	417,964,000
Daily average.....	1,310,000	1,779,000	1,747,000	1,557,000

(a) Less two days' production during the first week in April to equalize number of days covered for the two years. (b) Revised from last report. (c) Subject to revision.

### ANTHRACITE

		1920		
	Week	Coal Year to Date	Week	Coal Year to Date
Jan. 29.....	1,999,000	75,632,000	1,839,000	77,509,000
Feb. 5.....	1,985,000	77,617,000	1,451,000	78,960,000
Feb. 12.....	2,048,000	77,665,000	1,822,000	80,782,000

(a) Less 2 days' production during first week of April to equalize number of working days covered for the two years.

### BEEHIVE COKE

		1920			
	Feb. 12(a)	Feb. 5(b)	Feb. 14	1921 to Date	1920 to Date
	227,000	233,000	439,000	1,503,000	2,849,000

(a) Subject to revision. (b) Revised from last report. (c) Less two days' production during New Year's week to equalize number of days covered for last two years.

"No market" conditions are steadily growing, closely approximating 50 per cent of full-time output, taking the field as a whole. Production in the Pocahontas, New River and Winding Gulf sections recovered slightly during the first week of February, while the sluggish demand caused an increase in the number of idle mines very generally throughout the rest of the country. In the Appalachian region a decline in the Northern and Middle sections, which commenced two months ago, continued through the week ended Feb. 5. Production for that period was 4,619,000 net tons, or a decrease from the preceding week of 259,000 tons and 28 per cent less than the weekly average in 1920.

### DECLINING PRICES MAKE FOR LABOR EFFICIENCY

For some time past no labor comments have been necessary, as declining prices, abolition of wage bonuses, etc., operated for a greater degree of efficiency on the part of miners. However, two disturbances were noted in the past week—many Kansas miners are idle as a protest against the sentencing of Alexander Howat, district president of the

United Mine Workers, and in Alabama a bridge serving an Alabama mine was dynamited. This mine, which is run open shop, was served a warning against its operation, it is alleged.

#### TIDEWATER

Accumulation at the piers is being slowly absorbed, but in most cases by material price reductions. The market is extremely flat, only one cargo clearing for France from Hampton Roads during the week ended Feb. 12, and this was shipped on a contract made before the French Government's recent action in placing a new low maximum price on imports of American coal had practically stopped our sales in that country. Loadings at this port declined to 290,000 gross tons. Less coal is coming to Tide on a consignment basis, producers being content to run on short time rather than repeat their recent unprofitable experience when such coal was sold at ruinous figures. Offerings were light but it was necessary to shade quotations to obtain business. Lots of Pools 1 and 2 on hand at piers were quoted \$6 f.o.b. Hampton Roads and in some cases even lower. Shipments coastwise continue to decline. Vessel owners are making a vigorous effort to obtain charters and several private terms were closed during the week ranging \$1.25@\$1.50, vessel rate to Boston.

#### TWENTY-NINE FIRMS BID ON PANAMA R.R. COAL

Prices ranging from \$3.50 to \$4.39 per net ton f.o.b. mines were quoted by twenty-nine coal firms for furnishing the Panama Railroad Co. with 750,000 tons of pools 1 and 2 coal when the bids were opened on Feb. 18 in New York City. Davis Coal & Coke Co. offered to supply 300,000 tons of Davis and Orenda, pool 71, at \$4.02, and the Stine Coal & Coke Co. bid on 180,000 tons of pool 10 at \$3 net ton f.o.b. mines. The bid of Lake & Export Coal Co. received after time for closing, was read without prejudice. It was for 250,000 tons of pools 1 and 2 at \$4.25. The Pocahontas Fuel Co.'s bid provided that the price be named once each month. The White Oak Coal Co. provided in its bid that shipments of 4,000 tons monthly start Aug. 1, while the bid of the Central Pocahontas Coal Co. provided for acceptance by Feb. 28. The bid of Ajax Coal & Mining Co. of \$7.53

was for gross tons, f.o.b. Hampton Roads. The bid of Dexter & Carpenter, Inc., was subject to acceptance in nine days. This concern also submitted an alternative bid on the same tonnage at cost plus 10 per cent. The United Collieries Corporation in its bid for 75,000 tons stated the coal would be from mines of the Gulf Smokeless Coal Co., while L. A. Snead Co. proposed to supply the 100,000 tons bid on from the Tams, Hot Coal and Wyco mines, Raleigh County, West Virginia.

All-rail movement to New England increased slightly during the week ended Feb. 12. According to the Geological Survey 3,390 cars were forwarded through the five rail gateways. Compared with the week preceding this was an increase of 171 cars, or 5 per cent.

#### ANTHRACITE

Hard-coal production continued in heavy volume during the second week in February. The output amounted to 2,048,000 net tons, thus approaching the high record set in 1918. Cumulative production for the coal year (April 1, 1920, to date) now stands at 79,665,000 net tons, or slightly over a million tons less than during the corresponding period of the preceding coal year.

#### HEAVY COMPANY OUTPUT LOWERS INDEPENDENT PRICE

Continued heavy production by the larger companies has now met the urgent demand and the situation is much easier. Independent prices softened further during the week and good domestic grades can now be obtained on a basis of about \$8.75 f.o.b. mines. This brings independent anthracite much nearer to the level of company coal. Shippers to New England are now actively canvassing for the trade which for a time at least was utterly disregarded during the period of feverish demand.

#### COKE

Beehive coke production continued its steady decline during the week ended Feb. 12. The output fell to 227,000 net tons, a decrease of 6,000 tons when compared with that of the preceding week. Cumulative production for the year has reached 1,503,000 tons, or but little over half of that during the corresponding period in 1920.

## Reports From the Market Centers

### New England

#### BOSTON

*Steam Grades Extremely Quiet—Water Freights Much Reduced—Less coal at Tidewater Piers—Pocahontas and New River Output Curtailed—Anthracite Easy.*

**Bituminous**—In the face of quotations based on figures close to \$3 per net ton at the mines for fair grades classified in Pools 10 and 11, the present inactivity may be like turning down gold dollars, but buyers always love company and it is extremely difficult to persuade them to enter a market in small groups. They feel much more comfortable when all hands are after the same thing.

Spot buying as well as purchasing on contract is only scattered. Steam-users are frankly not ready to buy; they want to see something like a settled contract basis before giving much encouragement to shippers. A large number,

also, are to carry over such heavy stocks that spot purchases later in the season will give them all they are likely to need for next fall and winter. The general industrial situation here is but little improved.

Another element in the current market is the depression in water freights. The unions are resisting any scaling down of seamen's wages, and it is quite possible there will be something in the nature of a strike later on. The basic consideration, however, is the great surplus of marine transportation and rates have declined as sharply as towing and other charges will permit. While \$1.25@\$1.50 from New York to Boston is freely quoted, in the view of some of those closely in touch with freighting a flat basis of \$1 is within the possibilities. Steamer tonnage is a drug on the market, and several private terms have been negotiated that show the great eagerness of owners to secure charters. All this tends to discourage purchases all-rail. The proposed re-

vision upward of all-rail rates to points that are assumed to be competitive with Tidewater is another factor. Receipts both by water and all-rail have fallen off to a marked degree.

Accumulations at Tide are being absorbed very slowly. The outlook for spot sales for transshipment by vessel is in no way encouraging. Serious cuts have been made in prices in order to move coal at Tidewater, reductions which in most cases would not have been considered at the mines merely to place coal. A lot of operators have determined to rest on their returns of last season, at least for the present, rather than sell at less than mining cost.

Curtailment in the smokeless districts in West Virginia has been enforced almost horizontally. A few operations have been obliged by the lack of business West to dispose of accumulated slack, but less of this is likely to be heard of during March.

Pocahontas and New River are quoted at \$5.75@\$6.25 per gross ton f.o.b. Hampton Roads, but coal at such prices is in the hands of agencies that have few contracts. Clearfield, Cambria and Somerset prices are unchanged and are shown in the Weekly Review.

**Anthracite**—Domestic sizes are noticeably in much better supply. Shippers who had withdrawn from this

market to every point and purpose are now actively canvassing for orders. Retail trade is extremely dull.

## Tidewater—East

### PHILADELPHIA

*Anthracite "Break" Seems on the Way—Independent Prices Soften—Market Glutted with Steam Sizes—Bituminous Extremely Quiet with Prices Firm—Contracting at Standstill.*

**Anthracite**—The situation is easing up fast. Retail yards are accumulating stocks of all sizes and are presenting a fuller appearance than for many months. The weather has been extremely balmy and current consumption has been much reduced. While most dealers have had a fair amount of business, others have reached the point where they have for the first time in four years laid off men in their yards due to lack of business.

The shipping trade is of the opinion that as April approaches there will be a strengthening all around, similar to the break which followed in February, 1919, which was quickly succeeded by a rush period which has continued to this time. Due to the easier conditions the small independents who have been out of the local market are coming back with offers of prepared sizes around \$8.50, but with no trade left are finding it difficult to secure an outlet.

With coal easier some of the smaller dealers quickly held or cancelled their orders, but concerns with plenty of storage room are going to let it come.

The steam market almost approaches a glut. Independents are offering buckwheat as low as \$2.75, as compared with company price of \$4.25. We have also heard of a Tidewater shipment of buckwheat being sacrificed at \$1.90. Barley caught in a similar manner has been reported down to 90c. The companies are fast creating big piles of steam sizes in the storage yards, as they are following traditional custom in not shading the price.

**Bituminous**—So far as prices are concerned the soft coal market is firm. Prices have averaged close to the same level for three weeks past, with Pool 9 offered \$3@\$3.25. Spot quotations are shown in the Weekly Review.

Consumers are still quite conservative in adding to their stocks and the only buying is by the concern which is absolutely in need. With most mines closed down deliveries are far from prompt, and the belief now is that with the least stimulation prices will advance moderately.

There is little talk of contracts, as the consumer seems to have learned as much as he can of the attitude of the shippers on this point. Big houses cling to their \$4.35 price, but nearly all in the trade are simply sitting tight and waiting for developments, as they realize that consumers generally will not sign agreements at this time at any price approximating \$4.35.

### NEW YORK

*Domestic Coals Easier—Independent Quotations Lower—Bituminous Demand Is Quiet—Little Change in Quotations.*

**Anthracite**—The situation has become so easy that some wonder why the market has not broken. There has been a gradual lowering of quotations for independent coals and last week's prices ranged \$8.75@\$9, or slightly more than the company schedule with the 75c. differential added. On the other hand, some shippers said they were moving coal on orders placed when fuel was selling around \$10.

Coal is coming forward in larger supply and already there is a tendency on the part of large buyers of independent coals to restrict their purchases. Those dealers who are regular customers of the large producers are obtaining sufficient tonnage for their needs and unless weather conditions change considerably will begin the new coal year with bins well filled. There are many inquiries as to what might be expected of prices on April 1 but so far nothing definite has been learned.

All of the domestic coals are in better supply. Most producers are working on old orders and in this way find a ready market for their product.

Steam coals are being stored in large quantities by the producers. Demand is flat. Buckwheat is being quoted \$3.25 @\$3.50. Rice, which is holding up better than buckwheat, \$2.25@\$2.50, and barley from \$1 up, with occasional sales at lower figures.

**Bituminous**—The market developed a surprising steadiness during the week. Prices were slightly firmer, although demand was no stronger. Contract coals continued to move in good volume. Buyers were out to take in whatever "distress" coal they could obtain but the supply was small.

Not many contracts have been closed but prices ranged about one dollar more than present mine quotations. The large supplies in consumers bins will probably be the reason for much delay in the closing of many contracts. Customers are expected to hesitate in signing at prices higher than the existing market and will take chances in spot buying.

Shippers are still exercising care in sending coal to Tidewater. There is no large surplus on the docks, while there are comparatively few loaded boats in the harbor.

Quotations f.o.b. this harbor are on a slightly lower basis than prices for the same coal at the mine. The range of mine prices for the various pools shows little variation from last week. Quotations appear in the Weekly Review.

### BALTIMORE

*Price Conditions Improve—Export Movement Is Poor—Bunkering Again Permitted at Piers—Hard Coal in Light Sales.*

**Bituminous**—Some coal men see a "silver lining" and point to the fact that the basis of sales generally is better at this writing than a week or by running the plan generally is to

ten days ago. While this is true, there is no doubt that some remarkable cutting, even on high grade coals, has been and still is in progress. Dealing with the market as a whole, it may be pointed out as a sign that business is improving that the demand for best coals is slightly stronger.

The average run of prices at the mines for best steam coals, such as Pools 71 and 9, with some of Pool 1 occasionally, are around \$3@\$3.25. A large producer has sold in this market and is still selling at times Pool 9 as low as \$2.25@\$2.50 at the mines. As this is the average of such coals as Pool 10 and 11 here at present, the offerings of Pool 9 on this basis have at times cut out the sales of other grades. Lower class steam coals are still to be had at \$2@\$2.15.

Export movement is poor, the total cargo loadings for the first half of February running only 50,000 tons, with around 7,000 additional taken as bunker supply. In the lull the B. & O. and Pennsylvania are giving a 60-day trial to the plan of again allowing loading of bunkers at the piers instead of in stream. Thus the cost per ton for trimming is cut to 31 $\frac{1}{2}$ c., against the present charge for lightering, loading and trimming up to 35 feet of \$1.10 at present, which was formerly \$1.40.

**Anthracite**—Receipts here continue light, with the demand very poor in the face of warm temperatures. Yard supplies are sufficient to meet any sudden emergency. While most dealers are figuring that there will be a re-adjustment of wholesale prices in April, they are figuring that it will consist of raising the company rates to a reasonable "independent" charge and the bringing down of the prices demanded by the high-flying independents to the same scale. Such a plan would not allow a cut in retail prices. The spring schedule is, therefore, figured to be pretty near that set last October and now in force.

### BUFFALO

*Bituminous As Weak As Ever—Contracts Hard to Make—Anthracite Situation Easy.*

**Bituminous**—Some shippers claim to see a plain weakening of prices still going on. They are finding it impossible to sell enough coal on the road to make it worth while to send salesmen out and are waiting for the general business of the country to revive.

It is claimed that consumers are using more coal than they are buying, and as a rule they are not asking for contracts. Some railroads are in the market but shippers do not see any prospect of an agreement on prices and do not pay much attention to them. A few early contracts have been made as high as \$4, but it would not be possible to do anything of the sort now, and as the shipper does not care to contract from \$3 down he simply stays out of that side of the market.

There is a still increasing number of mines closing down. Where a mine would lose more money by closing than

keep going. Prices are weak and unsteady at \$3.50 for Youghiogheny gas, \$3 for Pittsburgh and No. 8 lump, \$2.75 for all mine run and \$2@\$2.50 for slack.

**Anthracite**—The situation is easing off rapidly. There is coal enough to meet all demands, in fact the season is beginning to wane so fast that consumers are becoming quite unconcerned. The light winter seems to please the shippers as well as anyone, for they have been unable to supply the demand so long that they are relieved when it drops off. Independent operators are still asking a small premium. It now runs a little above a dollar a ton and is on the downward turn, soon to disappear, as it looks now.

It will be some time before there is enough surplus to afford any for the Lake trade. It would be easy to load it now, as there is no ice in the harbor, but it will probably be another month before there is enough coal to make a showing in that direction.

**Coke**—Furnaces do not seem to have their season well mapped out yet. They may be running at good speed in a month and they may not get started soon enough to make much of a season of it. But for the big shutdown of the coke ovens local jobbers would get very little to do. They are getting some orders at about \$5.75@\$6.50 for 72-hour foundry, \$5@\$5.50 for 48-hour furnace, \$4.75 for stock and \$6.25 for domestic sizes.

#### HAMPTON ROADS

*No Spot Demand—Loadings Drop—Prices Lower—Accumulations Are Disappearing.*

Absence of any demand for spot coal has made the week ended Feb. 12 another period of pronounced dullness. Loadings at the various piers dropped to 290,000 gross tons, which is, with the exception of the third week in January, the lowest figure in eight months. Pools 1 and 2 have dropped to \$6 and below, while other prices are so varied as not to allow a market to be established.

Tidewater stocks were reduced nearly 30,000 tons during the week, while dumpings were also cut down, showing that mine shipments are being greatly curtailed.

Local piers are working on two shifts per days, with too much work for one and not enough for two full shifts. None of the piers at the end of the week had any vessel tonnage for loading, with the exception of a few isolated cases.

Prices have a weaker tendency, especially in the case of low-volatile coals, where accumulations still exist to some extent.

Some 40 vessels are expected at this port for bunkers, and one for cargo coal at this writing. Twelve cargoes cleared during the week, only two being shipped to France, contracts for this having been made before the French government's action in placing a maximum price on coal went into

effect. Among cargoes clearing were:

Am. SS Suffolk, for Marseilles, 6,000 tons; Br. SS Malvern Range, for Rotterdam, 5,918 tons; Br. SS Devon City, for Buenos Aires, 6,729 tons; Dan. SS Thalassa, for Buenos Aires, 2,159 tons; Dan. SS Asgerd, for Buenos Aires, 2,425 tons; Am. Schr. Samuel W. Hathaway, for Hamilton, Bermuda, 1,206 tons; Am. SS Santa Cecilia, for Italy, 6,817 tons; Am. SS Eastern Glen, for Tiburon, 7,574 tons; Br. SS Blossom Heath, for Chile, 7,188 tons; Br. SS Dunolly, for Bordeaux, 4,930 tons; Br. SS Ronalee, for Amsterdam, 4,501 tons; Swed. SS Gothia, for Cienfuegos, 2,700 tons.

#### Northwest

##### MILWAUKEE

*Unprecedented Dullness Prevails—Yards Closed Every Other Day—Hints of Another Price Cut.*

It looks as if the fuel business would remain quiet for the remainder of the season. A real old-fashioned cold wave might galvanize the market into life for a period. The various coal yards and offices bear a Sunday aspect the week round, local deliveries being at such a low ebb that the leading distributing yards are now closed every other day.

There is very little outward movement by rail to the interior, as country dealers are buying very gingerly and industries are consuming only a small fraction of what they required last year at this time. As one dealer put it, everybody is scared to death.

Naturally there are hints of further reduction in soft coal and coke. This may come on March 1 if conditions do not improve by that time. Such a reduction would leave anthracite hanging high and naturally would reduce the demand for it. Coke piles are growing and unless prices are reduced thousands of tons may have to be carried over until another season. There is no change in the price list formulated on Feb. 1.

##### MINNEAPOLIS

*Wide Range of Prices, with Trend Steadily Downward—Interest in Spring Quotations—Spot Business Very Low.*

There seems to be almost nothing to keep up interest in the coal business at this time, but members of the trade have some distractions from monotony in wondering what will be done with the Calder bill and also what is likely to be done in the Minnesota legislature. There is nothing strenuous pending in the latter body but a bill authorizing municipal coal yards, but there is always a possibility that some drastic move will come forward up to the last day for filing bills. Of course there is an investigation or two in sight as usual.

Prices on soft coals of all grades are from \$1 to \$3 lower than two months ago. None of the declines have moved as declines usually do—that is in substantial uniformity—one concern starting with a cut which is speedily followed by others. Instead, there has been a darting around of

prices, one after another, without any apparent connection. Those with limited stocks are less eager to cut prices, while those seeing danger of carrying over considerable coal have slashed in an effort to get from under. There is hardly a uniform market existing on similar grades in this territory, either on dock or all-rail coal.

No word has been received as yet as to the opening prices for spring. Many insist that present costs are as low as the spring can possibly give, arguing that present costs are based upon current mine costs which cannot be changed much, if at all. People of the Northwest feel that they have been held up on coal costs, particularly on hard coal, and it will take a great deal of arguing to convince them to the contrary. And they will have the reports of the former fuel administrator to support them. That much can be explained to the satisfaction of reasonable beings has but little bearing, for the reason that it has not been explained, and would hardly be received if it were attempted.

Current business is dragging along on the closest sort of buying for urgent requirements, and there is hardly a chance for any change for the remainder of the season.

#### Inland West

##### CHICAGO

*Slight Flurry in Screenings—Smokeless Strengthens — No Industrial Improvement.*

On account of decreased production and stagnation in the retail trade, there has been a small flurry in the screenings market. Screenings and steam coals which were selling as low as \$1.25 @\$1.50 last week, are now bringing \$1.75@\$2.

The domestic market is quiet with practically no demand, although some cold weather which is predicted will probably stimulate trade to a small extent. Dealers who buy smokeless coal are now having to pay a reasonable price for it as the days of open consignment and demurrage seem to have come to an end. Good Pocahontas lump and egg is selling at \$6, although very little is moving. Mine run is selling in small lots at \$4@\$4.50.

Franklin County operators are holding firmly to their circular prices and the retailer who wants this coal still has to pay \$4.15 for lump, furnace and small egg.

Chicago coal men are becoming accustomed to the idea that business will be very dull until July first or after. They have scanned the commercial horizon and see no indications of improvement. Far-sighted operators are closing their mines for repairs or running them only one or two days a week. When an operator gets enough business booked to run his mine one or two days, he does it, but after that, he usually closes it again and waits for another accumulation of orders.

**CLEVELAND**

*Heavy Consumption from Reserves—No Spot Activity—Prices Weaken Slightly.*

**Bituminous**—Sluggishness in the coal trade is increasing and the last few days saw further declines in both production and prices. The No. 8 field is leading the state in working time. Slack has suffered the worst depression and some spot sales at \$1.75 have been reported. Current quotations will be found in the Weekly Review.

Industrial consumption is almost entirely from stocks and buying is practically at a standstill. Coal men say that more reserve fuel is being used than at any time in the last twenty years for this period of the season. While industrial conditions are better the improvement is not yet reflected in the coal buying market.

Bituminous receipts continue at the minimum, the number of cars arriving during the week ended Feb. 12 being: industrial, 1,132 cars; domestic, 353 cars.

**Pocahontas and Anthracite**—Retail prices for Pocahontas have been reduced from \$11.90 to \$11.60. Curtailed rail movement of domestic indicates that domestic dealers are cutting down their purchases and are selling out of their present yard stocks. No. 6 and No. 8 mine run steam at retail dropped to \$7.75.

**Lake**—Within the next week some 38,000 tons of bituminous will be loaded from the Ohio fields to Lake Erie docks. This constitutes virtually the only sign of life in the local trade.

**COLUMBUS**

*Reduction in Lump Production—Screenings Develop Strength—Contract Market Inactive—Prices Are Steady.*

Strength has developed in screenings, due largely to curtailment of lump production. Manufacturing plants are slowly resuming and there is a better demand for small sizes. As a result, screenings have advanced. Quotations have risen to \$1.90@\$2.10 and in some cases slightly higher.

Mine run is fairly strong under present conditions and a considerable tonnage is being used in place of nut, pea and slack. Some Pocahontas mine run is coming in but this is limited. Reserve steam stocks are still fairly large and the policy followed is to consume the reserve before buying much more. Mine prices are quoted in the Weekly Review.

Domestic trade is dull in every particular. Dealers have trouble to dispose of stocks because of the open winter which has prevailed. As a result householders are playing a waiting game and ordering in small loads only. Retail prices are rather firm at former levels. Hocking lump is \$7.50 @\$8, and mine run \$5.50@\$6; West Virginia splints \$8.50@\$9, while Pocahontas lump is \$10.50@\$11.

Some Lake shippers are looking around and a few small contracts have been made at rather low prices. But

conditions do not indicate any strength and little movement is anticipated before June 1.

Contracting for steam tonnage after April 1 is quiet. So far only a few scattering contracts have been closed and consumers are not pushing the matter.

**ST. LOUIS**

*Demoralized Conditions Prevail—Lower Prices Fail to Move Coal—Mildest Winter on Record.*

Extremely mild weather prevails throughout the territory. The tonnage of coal moved per capita is smaller than in the history of the St. Louis coal business. Added to the dull domestic call the industrial situation has brought about an extremely depressed market. Standard mines are generally working but one day per week although many have been idle now for several weeks. Prices remain unchanged and are quoted in the Weekly Review.

Mt. Olive field conditions are somewhat the same. The railroad tonnage is a little stronger, but two to three days per week is considered good running time.

In the Carterville field screenings are piling up. The domestic market is sluggish and there is an oversupply of all grades. Association mines are maintaining prices on domestic while fine coal ranges \$1.50@\$2.50. Independents are having great difficulty in marketing their product, and are cutting their prices.

Duquoin field conditions are extremely bad. In the Big Muddy field it is almost impossible to move screenings and this has made for mine idleness.

No anthracite is moving into St. Louis and the movement of coke is extremely slow. There is no change in retail prices.

**DETROIT**

*Indifference Among Buyers Continues—Receipts Are Greatly Reduced—Good Coal at Bargain Prices.*

**Bituminous**—With buying at a very low ebb the market in Detroit has become a listless, dragging affair. Jobbers say it is almost impossible to arouse any interest among consumers of steam or domestic sizes and that they are virtually obliged to force sales.

Although the industrial situation is reported making gradual improvement the gain is not yet reflected in any strengthening of demand. Nor do low prices seem to exercise any stimulating influence. Among the jobbers there is a belief that the continuance of existing market conditions is certain to be followed by a reflex and that later in the year there is likely to be a repetition of the developments that occasioned troublesome conditions last year.

Dealers are buying only when they confront the necessity of renewing some portion of their supply. While few yards are heavily stocked, the coal is not moving to consumers.

Ohio domestic lump is quoted at \$4 at the mines, with mine run \$2.75 and

nut and slack \$1.75. Lump from West Virginia or Kentucky is \$4, mine run \$2.75@\$3 and nut and slack at \$2. Smokeless mine run is \$4.50, with lump about \$6.50, though little is to be had.

**Anthracite**—Because of the diminished demand from household consumers there is an apparent increase in supply of anthracite in prepared sizes. Shipments have not materially increased. Retail prices remain at the level established last fall.

**CINCINNATI**

*Steam and Domesite Markets Inactive—Mine Idleness General—Prices Even Lower.*

Continued warm weather is largely blamed for the present state of the market. Many plants which have been closed for several months because of lack of orders still remain idle, while the few that have resumed operations are running but one or two days a week, and for the most part still have a sufficient supply on hand to last for some time.

Retail dealers are much perturbed over the continued warm weather which has been prevailing in Cincinnati during the past month or more. Because very little of this winter's coal supply has been used it is probable early fall orders will be affected accordingly.

In many of the public buildings and private institutions where ordinarily at this time of the year the winter's supply of coal is about exhausted, almost a third of the coal pile still remains untouched. Efforts to drum up trade in the way of future orders are meeting with little success.

Bituminous lump at the mines was quoted \$3.50@\$4, while nut and slack brought quotations as low as \$1.50@\$2. Smokeless lump was quoted \$5.50@\$5.75, while mine run was \$3.75@\$4. The following retail delivered prices were quoted: Bituminous lump, \$9.25@\$10; mine run, \$8.50@\$9; smokeless lump and egg, \$10.50@\$11; mine run, \$9.50; anthracite egg, \$15@\$16.25; domestic egg coke, \$14.50@\$16.

**West****DENVER**

*Bituminous Fairly Firm—Lignite Drops—"No Markets" Cut Production.*

Although actual production in bituminous mines reached a critical period during the first week in February, operators have kept prices firm in the face of a soft market. The lignite field, on the other hand, has weakened, further reductions at the mine and on retail markets being noted.

Car distribution has been a serious factor recently only in Routt County, where snows have made shipments slow and uncertain. Other fields escaped, perhaps, on account of the visible "no market" conditions that kept down production by one-fourth or an equivalent of 95,000 tons. Total

production in all fields for the week ended Feb. 5 was 194,896 tons.

Insistence on the part of certain lignite operators to keep their mines going is one reason ascribed to the latest 50c. reduction to \$5.25, which promptly became general in the Louisville district. Weld district, second-grade lignite, dropped 50c. at the mine to \$3.50, and took another 40c. tumble in retail markets. This makes the new price \$7.25.

Shoveled lignite lump is \$7 on retail markets. Lignite steam is practically unchanged, bringing \$2.40 at the mine and \$5.30 in wagon lots, retail. Bituminous steam is around \$3.25, but some has dropped as low as \$2.50. Bituminous steam retail is around \$6.75 and coking steam \$8.05.

## Southwest

### KANSAS CITY

*Retailers Endeavoring to Move Surplus—Prices Unchanged—Mine Idleness Growing.*

A brief spell of cold weather through this section is aiding retailers to clean up some of their excessive stocks. However, it came too late to have any material effect on the wholesale market which is extremely quiet.

Quotations are practically unchanged, although prices are only nominal, as little business is being done at these or any other figures. Mine operations continue on about the same schedules as reported last week.

Alexander Howatt, president of the Kansas District, U.M.W., has been sentenced to one year in jail but is out on bail pending a hearing for appeal. Howatt called a strike recently in violation of the injunction and his sentence for contempt followed. This has caused some mine idleness.

## South

### BIRMINGHAM

*No Steam Market—Continued Warm Weather Slackens Domestic Demand—Production Being Rapidly Curtailed.*

There is practically nothing doing in the coal market. No interest is being manifested in spot purchases, no new contracts are being offered, with few old ones expiring at this season, and there seems to be no indication of an early revival in the trade. Movement of steam is limited to the minimum tonnage allowed in contracts in most cases. Mine quotations are holding steady as a rule, ranging about as follows:

Mine-Run	Washed	Lump
Big Seam.....	\$2.95@3.25	\$3.50@4.00
Carbon Hill.....	2.85@3.35	3.35@3.85
Cahaba and		5.25@5.50
Black Creek	4.00@4.35	4.50@5.00
Pratt.....	3.50@4.00	
Corona.....	3.50	6.00
Montevallo.....		9.50

Demand for lump coal has slackened considerably on account of the continued warm weather and the conse-

quent falling off in retail trade, and there is now some surplus domestic coal to be had. Prices, however, have not declined as yet, but will likely seek lower levels on account of "no market" conditions affecting this class of producers for the first time in the past twelve months.

Quite a few commercial mines are now idle, those running being on an operating schedule of two and three days per week. Production is showing a rapid decline in the face of no demand.

### LOUISVILLE

*Mild Weather Slows Prepared Demand—Early Lakes Buying—Prices Weak.*

With extremely mild weather demand for prepared sizes has slumped away. Prices are weak, but about on a par with last week.

Mines are operating one to one and a half days a week. According to jobbers and producers, coal sales are worse now than at any previous time in two years or more, there being very little demand from any consuming industries.

The trade is not anticipating much early improvement in demand. Lake movement is not expected to be big this year, but it may come early.

It is reported that some inquiries have been received from Lake buyers, but probably just to line up prices. At that, these buyers could probably take advantage of some of the very low present prices of spot coal.

Harlan gas is in slightly better demand than some other southeastern

Kentucky coals, but all grades are dull. Hazard lump is quoted around \$3.75@ \$4, as against Harlan \$3.75@\$4.50. Hazard mine run is \$2.25@\$2.75, while Harlan is \$2.50@\$3. Screenings are being quoted \$1.25@\$1.75. Jellico and Straight creek grades are lining up close to Harlan, with Elkhorn between Hazard and Harlan.

## Canada

### TORONTO

*Trade Quiet and Featureless—Mild Weather Causes Decreased Demand.*

Trade continues quiet and featureless, and dealers are able to fill orders promptly. Most consumers having laid in stocks for the winter, business is largely confined to the poorer class who buy from hand to mouth, and the demand is unusually light, owing to the mildness of the season. Anthracite is coming forward in fair quantities and the yards are sufficiently well-stocked to meet any emergency which may occur through interruptions to transportation. There is little call for bituminous, of which there are ample supplies on hand with a downward tendency in prices.

Quotations are as follows:

Anthracite, egg, stove, nut and grate.	\$16.90
Pea.....	15.40
Bituminous steam.....	11.50@\$12.25
Domestic lump.....	13.25
Cannel.....	17.00
Wholesale f.o.b. cars at destination:	
Three-quarter lump.....	8.00@ 9.00
Slack.....	6.50@ 7.00

## News From the Coal Fields

### Northern Appalachian

#### UNIONTOWN

*Coke Output Sharply Curtailed—Demand is Non-Existent—Distress Tonnage at Minimum.*

Curtailment of output was commenced this week by the H. C. Frick Co. The coke subsidiary of the United States Steel Corporation has been operating virtually at capacity for several months past while all independent operators have been compelled to practically suspend operations. Frick plants basis and byproduct mines, excepting this week were placed on a 70 per cent those situated along the Monongahela River, are operating from 80 to 90 per cent.

The general industrial situation shows absolutely no change. Demand for both coal and coke remains nonexistent and consequently little tonnage is being produced. Coke buyers, however, who have been picking up "distress" tonnage at "bargain" prices are finding it more difficult every day to locate any such tonnage.

Never in the history of the region, operators say, has there been so little coke standing on tracks. While there remains very little demand for spot tonnage, jobbers are refusing to accept what few orders do come through because they do not know where to find the tonnage at the price offered. Furnace coke remains \$4.50@\$5 with foundry a dollar higher. Steam coal is quoted at \$2 but sales have been recorded as low as \$1.50. In several instances tonnage is being held at the quoted figure. Byproduct coal is quoted \$2.25@\$2.50.

#### PITTSBURGH

*Market Still More Stagnant—Operators Endeavor to Reduce Costs—Prices Slightly Weaker.*

The coal market has become even more stagnant than formerly, there being so little demand that the mines that were endeavoring to maintain an operation by day-to-day sales have practically given up the effort. Additional mines have closed, while with reduced requirements against contracts the operators who have been regulating their production to contract re-

uirements have had to curtail operations further.

Continued reduction in operations seems to have had one favorable effect, in that there is now little "distress" coal offered, and thus less tendency to make prices that are below what operators would accept against regular production. The market has not been stiffened thereby, however, as some operators are making efforts afresh to get down their production costs and feel that costs cannot well be reduced while a mine is idle.

Production as a whole is now at about 40 per cent of rated capacity. However light the line demand may be it is expected that there will be a material improvement in production when the Lakes season opens.

We quote spot coal approximately as follows: Steam, slack, \$1.85@\$2; mine run, \$2.20@\$2.50; screened, \$2.40@\$2.60; gas, mine run, \$2.25@\$2.50; screened, \$2.50@\$2.75; byproduct, \$2.50@\$2.75.

#### EASTERN OHIO

*Production Slumps—Lakes Tonnage Going Forward—Mine Ratings Reduced—Prices Stable.*

Contrary to expectations, production fell off during the week ended Feb. 12. Reports covering some 168 mines indicate an estimated production of 285,250 tons or about 44 per cent of the rated weekly potential capacity of 650,000 tons. The output shows a deficit of 22,000 tons as compared with the previous week.

It was anticipated that output during the week would hold up because of some stimulus in loading to Lake, but this did not materialize. However, it is understood 35,000 tons are lined up for boats at Erie and Ashtabula to come out of the No. 8 field immediately and this will no doubt assist in bolstering production during the coming week.

It is understood that February railroad ratings of the mines, based upon January performance, will result in a reduction in the rated capacity of the district, and the potential loss of production, account "no market" conditions, will show up correspondingly less.

Mines continue to work very irregularly and some are closed down completely. Operators generally are unable to detect any change in the sluggish market which has prevailed in this section since early January; at least there is yet no perceptible change for the better.

Mine prices remain stationary, the range being somewhat as follows: Slack, \$1.75@\$2.25; mine run, \$2.25@\$2.75; 1½-in. lump, \$3.25@\$3.75, and domestic lump, \$3.75@\$4.25.

#### CENTRAL PENNSYLVANIA

*Trade Still Stagnant—Operations Curtailed—Improvement Expected with New Administration.*

Due to the fact that weather conditions for the month of February have operated in favor of the consumer, mining conditions have not improved ma-

terially and the demand for coal for immediate shipment has been low, good coal being offered at \$2.30@\$2.75.

There is a general feeling of optimism among operators that business will revive immediately after the big events of March 4 are over and the new administration gets settled down to a program of reconstruction. At a meeting of the Kiwanis Club of Altoona, which is made up of a large number of the leading business men of the city, a resolution was unanimously adopted opposing the Calder bill now before congress.

#### CONNELLSVILLE

*Complete Stagnation Due to Light Blast Furnace Operations—Buyers Could Name Prices—Production Further Reduced.*

With a complete absence of any demand for furnace coke on account of an unprecedented situation in pig iron there is no opportunity for a definite market to exist. Only a few blast furnaces that depend on Connellsburg coke are operating, and some of these are likely to go out in the near future. While there was not a great deal of contracting for the present half year, it is far in excess of the amount of coke actually required to sustain present blast furnace operations.

It is quite probable that if a furnace interest desired to buy spot furnace coke it could buy at practically its own price without any reference to the cost of production. There is a considerable stock of coke in the region, which is weathering from week to week, and which a furnace would hardly consider if it did wish to buy. The market is supposed to be made by the price at which freshly drawn coke could be bought, and that is hardly over \$4.50. Some of the operators are quite content to leave their ovens idle, while others are desirous of making sales for the purpose of getting an operation.

Foundry coke is in some demand, but only very limited, and in spot car-loads. The market is quoted approximately as follows: Spot furnace, \$4.50; contract, \$5; spot foundry, \$5.50@\$6.50; contract, \$6.50.

The *Courier* reports production in the week ended Feb. 12 at 127,060 tons by the furnace ovens, a decrease of 10,120 tons, and 19,080 tons by the merchant ovens, a decrease of 820 tons, making a total of 146,140 tons, a decrease of 10,940 tons.

#### FAIRMONT AND PANHANDLE

*Mine Idleness More Pronounced—Distress Coal Tonnage Increases—Some Lakes Contracts.*

#### FAIRMONT

Mine idleness became more pronounced than ever during the week ended Feb. 12. Over 277 operations were closed down in northern West Virginia at the end of that period. Production was estimated at less than 50 per cent of capacity. Mines were being operated not more than two days per week. Spot sales were very few while

dead-loads increased, indicating that producers are throwing some coal on the market in an effort to keep their operations intact.

Offers made of \$2.40@\$2.50 on contract were not sufficiently alluring to most operators. Railroad fuel shipments were much under normal and the field suffered from the acute stagnation in the foreign market.

#### NORTHERN PANHANDLE

Conditions were slightly worse as compared with preceding weeks. Contract inquiries were more frequent. Spot sales were few and much coal so sold was sacrificed at figures below production costs. Producers are hoping that an early opening of the Lake season will afford them a much-needed outlet for their production. Some Lake coal was being contracted for at a price around \$3.50.

#### Middle West

##### MIDWEST REVIEW

*Consumption Declines Further—Better Interest Shown in Buying—Mines Steadily Reduce Output—Prices Firm.*

Extremely mild weather all over the Middle West has just about paralyzed the demand for domestic coal. Householders who are now coming to the bottom of their coal bins have come to the conclusion that prices are going to still lower levels and consequently are placing orders in very small lots.

The steam market is just about where it was last week, in short, in a state of stagnation. Factories that are lucky enough to be running are either burning storage coal or else taking a small amount due them on contract. In a great many cases, contracts have been held up entirely, while the manufacturer is purchasing coal at a cheaper price on the open market. This practice is being watched very closely by Illinois operators and this type of purchasing agent will doubtless find himself in a difficult position should the situation suddenly change. Salesmen who have been covering the territory pretty thoroughly report that factories are taking far more interest in coal than they did a few weeks ago. This is taken as an indication that the industrial situation is showing signs of improvement.

The situation in the Northwest is highly unsatisfactory. Last summer, thanks to priority orders, some docks were fortunate enough to get coal at reasonable prices, while others had to pay higher figures. Those who paid high prices are faced with the choice of having their coal stay on the docks all summer, or cutting prices to get in line with the others.

Mines in the Middlewest are steadily reducing their tonnage but in spite of this, more coal is being produced than is consumed and consequently, it is expected that more mines will be idle during the coming week. Practically all operators in the Illinois and

Indiana fields have had their fingers burned with demurrage coal and have by this time learned that they are pursuing the wisest policy by keeping their mines closed.

Current prices are fairly stable and are shown in the Weekly Review.

#### WESTERN KENTUCKY

*Demand Quiet and Operations Sluggish—Prices Weaker.*

Present demand is dull, mild weather curtailing calls for prepared sizes, while steam coal is in very low demand due to light industrial operations, and fair stocks still in hand.

Prospects as a whole are not especially good, but western Kentucky has the advantage of better freight rates, enlarging her territory, and believes that the 1921 season as a whole will be a fair one, at any rate much better than some of the pre-war years.

Records for the week ended Feb. 12 show prepared coal average price at \$3.55, range, \$3.15@\$4.25; mine run, \$2.65, range, \$2.25@\$3; screenings, \$2.05, range, \$1.75@\$2.75.

This week's spot quotations show lump, \$3.25; mine run, \$2@\$2.25; screenings and nut and slack, \$1.45.

#### DUQUOIN

*Mild Weather Curtails Domestic—Spot Market Inactive.*

During the last week demand for lump fell off rapidly. The drop was unexpected in most regions and all mines were hit very hard. The only demand was for fine coal and many of the mines practically cleaned their storage tracks of screenings and partly of nut coal. Egg remained heavy throughout the week with very little moving.

The weather for the first two weeks in February has been almost the mildest on record in southern Illinois. Prices were very unstable, with practically no coal being bought on the spot market.

#### Middle Appalachian

##### LOW-VOLATILE FIELDS

*All Markets Stagnant—Production Declines—Mine Idleness Grows—Demurrage Coal Accumulates.*

##### NEW RIVER AND THE GULF

Production in the New River region was smaller during the second week of February than any time in recent years. This was entirely due to reduced contract needs. Operations were confined to less than two days during the week. Although there was no spot market, some smaller companies proceeded to slash prices merely to keep running. At Newport News the low price of \$6 alongside was made.

Demurrage coal is accumulating at Tide and also in the Middle West. Few contracts are being offered, although some operators are making agreements

and naming the price every thirty days.

The same conditions prevailed in the Winding Gulf region. Mine idleness was general except where contracts still held or where cars were shipped unsold.

##### POCAHONTAS AND TUG RIVER

In the Pocahontas region "no market" losses alone represented more than the total tonnage produced. The output was cut to a minimum by dwindling contract orders. However, unconsigned loads were few, owing to the policy of the N. & W. in setting out such loads at weighing points. There was enough unsold coal at Tide and Western points to force prices even lower.

Even the best grades of Tug River coal found no market as conditions in general paralleled those in the Pocahontas region. Tidewater points were overstocked and lower prices resulted from such conditions. Empties were so plentiful that they interfered with the free movement of the small tonnage loaded.

##### HIGH-VOLATILE FIELDS

*Contract Orders Are Fewer—Spot Sales Limited—Production Greatly Curtailed—More Mines Down.*

##### KANAWHA

Production declined during the week ended Feb. 12, the output not exceeding 75,000 tons. Spot sales were exceedingly few and distress coal in some instances was sold at ruinous figures. Only limited contracts remained in force. More mines closed during the week owing to the stagnant market.

##### LOGAN AND THACKER

Increased production in the Logan region followed some resumption of mine operations. Total production reached about 150,000 tons or 23 per cent of potential working time. This resumption was possible because of a revival of contract orders, while the spot market was almost entirely inactive. Operations were limited to a day or so per week and producers refused to run on spot orders offered at ruling price levels.

Williamson production was cut by "no markets," the output being placed at about 45 per cent of capacity. Strike losses were no longer a factor. Little coal changed hands on the spot market and the better rate of production was maintained due to the fact that contract suspensions were not quite so heavy as in other high volatile regions.

##### NORTHEASTERN KENTUCKY

"No market" losses alone represented 175,000 tons, production being limited to 20 per cent of potential capacity. Market conditions were virtually unchanged, although even the light demand for domestic weakened. Production figures show that the policy of the producer is to withdraw from any activity in the spot market and await better prices, closing his mine in the meantime.

#### VIRGINIA

Only about 100,000 tons or 50 per cent was the production figure for the week ended Feb. 12. The entire loss was due to dull markets. Producers believe that industrial reserves are not large and that it will not be long before more normal industrial consumption will react on the present sluggish market.

#### Southern Appalachian

##### SOUTHEASTERN KENTUCKY

*Prices Continue to Slump—Demand for Prepared Coals Very Light—Few Mines Running.*

The market for all coal continues in a nonchalant mood, with buyers continuing to beat down prices. Domestic dealers are buying but little in anticipation of the approach of spring.

Both buyers and sellers are now getting interested in probable prices for the coming season's contracts, but so far they are not very close together. Larger mines are standing pat on a price that will enable them to make a fair profit, but some operators are still pursuing a cut-throat policy, naming ridiculous prices for spot coal. There is also considerable distress coal in the South, which is knocking prices right and left.

Only a few mines are operating, and some of them state that unless there is a material change in the market they cannot hold steady running time much longer. Cars are plentiful, and labor is in a working mood.

#### West

##### UTAH

*Mine Idleness Grows—Coast Trade Better—Labor Plentiful.*

Mines are not working more than half their capacity and there are no signs at present that the situation is going to be better in the near future. Consumers are buying only such coal as they need to carry on. Merchants of Utah's capital city have said so much about "slashing prices," "pre-war prices," "prices returning to normal," and the like for the past three months that buyers are looking for even lower coal prices.

The coast trade is a little more brisk. Prices for Utah coal at the mines are: Lump, \$5; mine run \$4, slack \$2.75. Retail prices are \$10 for lump, \$9.50 for nut, \$6.75 for pea and \$6.25 for slack. Dealers in Salt Lake City are not buying now, but stocks appear adequate.

Labor conditions are good. Producers are letting out many of the less desirable men but are trying to retain all the better-class miners. Retailers are turning many men away every day.

# MINE And COMPANY NEWS

## ALABAMA

**Walter Moore**, of Birmingham, is president of a new corporation which plans big coal developments around Empire. The company is capitalized at \$2,500,000, and owns properties of 45,000 acres in the Alabama coal fields of the Birmingham district, together with the **Empire Coal Co.**, the **Panama Coal & Iron Co.**, and lands owned personally by Mr. Moore. Engineering plans are being prepared for mining installations and town construction estimated to cost \$970,000.

## COLORADO

**Proposed legislation**, intended primarily to curb alleged profiteering among coal dealers, but broad enough in its scope to involve operators who might be similarly charged, is arousing considerable interest in discussions incident to its consideration in the state legislature. The bill is aimed at "profiteering in fuel, food and clothing," and besides carrying severe penalties, gives the purchaser of these necessities at a high price the right to go into court and charge the merchant with making an unreasonable profit.

Judgment obtained by the city of Denver against John R. Smith in a suit growing out of the city's venture in the coal business, has been set aside by the District Court and a new trial ordered on a supplementary showing. A jury had agreed that the city was entitled to collect on a \$5,000 bond which Smith posted to guarantee the fulfillment of a contract which the **Cambro Coal Co.** of Lafayette had made to furnish the city with coal from its mines.

## ILLINOIS

The tipple of the **Eagen Bros. Coal Co.**, near Canton, was recently destroyed by fire, which is supposed to have originated in the tip house of the mine. The damage done by the fire will cause the plant to be idle for some time. All of the men who were at work in the mine at the time the fire broke out escaped from the air shaft.

**The Perry County Coal Corporation** of St. Louis and its selling agent, the **West Virginia Coal Co.**, recently filed suit against the B. & O. for \$125,000 damages. Failure to properly distribute coal cars is given as the main cause for the suit, the Perry corporation claiming \$100,000 damages and the West Virginia Coal Co., \$25,000.

It has been generally understood for many years that the ancient No. 1 **Big Muddy** mine out of Murphysboro was the first deep-mining operation in this vicinity. Evidence to the contrary is stated by John Weigle that a slope miner two miles west of this place, has run his slope into ancient coal workings on the Graff land adjoining Indian Creek. The workings are in fairly good condition, the props being well preserved, and indications are that this mining must have been carried on previous to a hundred years ago.

## INDIANA

**The Shelby Clay and Coal Co.**, operating the Sterling mine, west of Brazil, has been sold to the Brazil Machine and Foundry Co. at receiver's sale, for \$6,260. The original claims of the miners against the company were \$6,000. The new owners will dig out the remaining coal and then dismantle the mine. As a result of the closing of the mine, a miners' train on the Otter Creek branch of the Chicago & Eastern Illinois railroad is being taken off.

Announcement has been made of the formation of the **Tower Hill Coal Co.** at Linton. K. L. Ogle, John Hibbitt, and S. D. Royce of Terre Haute, organized the company, which has a capital stock of \$50,000.

A new mining company has been organized at Evansville, with a capital stock of \$100,000. The company will be known as the **Fricke & Blair Co.** The company is incorporated under the laws of Indiana and the directors are L. A. Fricke, Christene J. Fricke and J. H. Blair.

The **Vigo Mining Co.**, of Terre Haute, has filed a complaint with the Public Service Commission of Indiana against the Illinois Central and Monon railroads, asking that the roads be ordered to refund money on freight charges for hauling water from Sullivan, to its mine near Victoria. Charges for this amounting to \$1,400 were approximately twice as high as similar charges for service to other mines, it is alleged, and was due to separate rates being charged by each railroad.

Asking for the appointment of a receiver, and for \$332.85, alleged to be due him for work and labor performed, Roy Mann, of Terre Haute, has filed suit in the superior court against the **Big Four Coal & Mining Co.** Mann alleges that the amount was due him and that approximately \$1,800 was due eighteen other miners for labor.

Preliminary arguments in the case of the **Boonville Mining Co.** at Princeton, against the **Cypress Creek Coal Co.**, defining issues, were heard recently in the Gibson circuit court, with Chase Harding, of Crawfordsville, special judge, on the bench. The case is a suit to quit title and involves coal rights valued at \$250,000. The actual trial date has not been fixed.

Coal mines in Indiana are being hard hit by a slump in sales. A number have been forced to close on account of lack of business. The **Island Valley** mine near Jasonville was closed indefinitely Feb. 1. About 150 men were employed.

## KENTUCKY

**The Little Fork Coal Co.** of Willard has won its suit before the Interstate Commerce Commission against the Eastern Kentucky Ry. for a readjustment of freight rates to Cincinnati and other points. The railroad has been ordered to prescribe reasonable and non-prejudicial rates. The coal company has also been awarded reparations amounting to several thousand dollars for the excessive rates charged.

Charleston and Wheeling coal men are largely interested in the **Tidewater & Western Coal Co.** which has been organized as a Delaware corporation with a capital stock of \$6,600,000. This concern has recently come into the possession of large acreages of coal, oil, gas and timber lands in Kentucky, such territory being in the counties of Whitley, Laurel and Pulaski. The company is said to have acquired more than 28,000 acres, 10,000 of which are underlaid with deposits of cannel coal. The company proposes not only to develop its coal territory but also to develop available water power.

H. J. Nunnemacher, Herman Franke and Walter S. Dropper, of Milwaukee, Wis., were awarded \$18,000 in a suit against J. D. McRae, W. Wayne Wilson, John T. Glover and James Williams. The litigation grew out of an option on a coal mine alleged to be owned by the **Brownie Creek Coal Co.** near Miracle, the plaintiffs claiming that they were deceived in the transaction. It was further stated in the petition that E. A. Pollard, who acted as agent, conspired with other defendants to deceive the plaintiffs, who paid \$18,000 for the option under an agreement that the defendants would each pay \$6,000 into the corporation.

Among new companies incorporated in the mountain coal fields is the **Bellinger-Jones Coal Co.**, with \$90,000 capital, organized in the Hazard field by J. N. Bellinger, J. E. Jones, Bert Buel, and W. B. Vance, Tennesseans.

In the new Beaver Creek field the **Porter Mining Co.**, which recently increased its capital to \$175,000, will make developments, leases having been closed. This new development will be on the Baltimore & Ohio.

## MARYLAND

The **Western Maryland R.R. Co.** is planning to place its new coaling pier at Port Covington in service on March 15. The new pier is 800 ft. long and will have a dumping capacity of 40 cars per hour, or 20,000 tons in a 10-hour day. All machinery is electrically operated. The company has arranged for certain extensions in the original plans and will expend about \$250,000, it is said, for additional machinery and construction work.

## MINNESOTA

The wave of crime has included a number of holdups of coal offices in the Twin Cities. So when the men of the **Campbell Coal Co.**'s extreme suburban office at Richfield, on the southern edge of Minneapolis, saw three armed men approaching, and stop to adjust masks, they took no chances. The door was barred with a heavy desk. Entrance being blocked the men fired through the door, but the shots failed to land on the inmates, and the assaulters disappeared in the neighboring railroad yards.

## MISSOURI

Frank M. Leaply has been appointed receiver of the **Billy's Creek Coal Co.**, near Novinger. The closing of factories in all parts of the country has made it difficult for the company to collect its bills, whereupon it became insolvent. The last week it operated it was unable to meet its payroll.

## NEW YORK

Buffalo capitalists have organized the **Egkold Corporation** with \$500,000 capital stock, for the purpose of manufacturing anthracite briquets. An office is opening in the Association Service Bldg. and options have been obtained on property in this vicinity for the plant. It is planned to be ready for operation by July. The president is Arthur Warne, Jr., and the secretary, Cassius M. Webb, Jr.

## OHIO

Assistant U. S. District Attorney Ford has begun to examine the mass of evidence and data secured by special agents of the Department of Justice when they investigated the coal situation in Ohio. Mr. Ford announced that the Federal Grand Jury would be convened in April instead of June as is the custom. The evidence will be submitted to the Grand Jury.

The sale of the Kirk-Dunn mines in Columbiana County, located five miles south of Lisbon, to the **Segar Fuel Co.**, of Ligonier, Pa., is announced by officials of the former concern. The deal was closed early in February by A. J. Tice, one of the principal stockholders of the **Kirk-Dunn Coal Co.**

A contract to supply 2,500 tons of nut, pea and slack for the use of the various city departments of Hamilton, has been awarded to the **Reliance Coal & Coke Co.**, of Cincinnati, at \$3.88 $\frac{1}{2}$ . The contract is to expire April 1.

At a meeting in the Wheeling & Lake Erie R.R. offices of coal operators, jobbers and retailers, consideration was given to the matter of stimulating the production and movement of coal this time from mines on that railroad. The conference resulted in the appointment of four representatives of the coal operators, to be accompanied by W. & L. E. traffic officers for the purpose of making a trade tour to all manufacturing points on the line and a special train was placed at their disposal. It is understood these representatives will call on manufacturers, retail dealers and other buyers of coal, assisted by the various Chambers of Commerce, and endeavor to stimulate the purchase and storing of coal during this period of industrial inactivity.

**The Rosemary Coal Co.**, Cleveland, operating mines at Flushing, Belmont County, announces that A. J. Wolf has been elected treasurer of that company effective Feb. 1.

A bill providing for a production tax on coal, oil, gas, and various other minerals, has recently been introduced in the Ohio legislature, proposing a tax of one per cent per annum upon the gross value of such minerals produced during the preceding calendar year. Representatives of the various interests affected, appeared before the Finance Committee of the Senate on Feb. 1, in opposition to the bill, S. B. No. 29. The coal people pointed out that the industry is already heavily burdened with taxes, especially in the appraisal of mining machinery and other equipment, as well as a transportation tax resulting from excessive increases in freight rates as compared with increases in rates on coal from producing districts in other states which reach the same markets. A similar bill was introduced several years ago but failed of passage.

The largest coal stripping operation in southeastern Ohio is to be undertaken by the Central Mining Co., recently organized at McKeever, Pa., which will have general offices at Lisbon. F. F. Marquardt is president; Dr. J. F. Conrad, secretary and F. M. Baldridge, treasurer. The company has secured 1,000 acres of coal lands in the vicinity of West Point, seven miles south of Lisbon. Several large steam shovels will be installed.

#### OKLAHOMA

**The McAlester-Edwards Coal Co.** of McAlester, one of the largest coal mining companies in Oklahoma, has entered suit in the Supreme Court of the District of Columbia seeking mandamus to compel John Barton Payne, secretary of the interior; Douglas H. Johnson, governor of the Chickasaw Nation, and William F. Semple, principal chief of the Choctaw Nation, to issue patents to certain coal lands in Oklahoma after acceptance of the tendered purchase price. The suit involves several thousand acres of the most valuable coal lands in Oklahoma, and is being watched with unusual interest, as on its outcome will depend several similar suits. The preferential right of a lessee of coal lands to purchase such lands at the appraised value when they are finally placed on sale is the basis of the suit.

**The Trinity Coal Co.** has been organized at Henryetta, and will develop coal lands in that part of Oklahoma. The company is capitalized at \$9,000, and the incorporators are: R. T. Potter of Okmulgee, Richard Corrigan and J. W. Kincaid of Henryetta.

#### PENNSYLVANIA

**The Lehigh Coal & Navigation Co.** reports for the year ended Dec. 31 last gross revenues of \$26,888,330, against \$24,886,907 in 1919 and a surplus, after dividends of \$1,711,137, compared with \$540,966 in the preceding year. The total amount of commercial coal produced by the company and its lessees in 1920 was 4,125,629 tons, against 4,108,968 tons in 1919.

**The American Coke Corporation** is preparing to strip 12 to 15 ft. of cover from about eight acres of Pittsburgh seam underlying the bottom land adjoining their Sunshine Mine at Linn, Fayette County, near Brownsville. Some narrow rooms were driven in this coal some years ago and caved in. Now all the remaining coal will be recovered after stripping.

Nearly a million bushels of coal a day were shipped down the Monongahela River in January, in spite of a decided slump in the operation of industries in the Monongahela Valley. According to the report of Lockmaster Sweeney of Lock No. 4, 29,232,000 bushels of coal passed through that lock in January. This amount was 11,262,000 bushels greater than recorded in January, 1920, but 7,620,000 bushels less than in December, 1920. No coke was shipped through the locks last month, while in January, 1920, 260,000 bushels were locked through.

The court has appointed A. A. Scott and L. C. Waggoner, of South Brownsville, as receivers for the Elmo Coal Co., a corporation with offices in Brownsville and workings in Luzerne township, upon petition of the Monongahela National Bank and the Second National Bank of Brownsville. The total assets of the company are placed at \$125,000 and the total indebtedness at \$45,000.

**The Fredericktown Cross Creek Coal Co.** has purchased two tracts of 250 acres of coal in Washington County along the

Monongahela River for \$40,000. The mine site is located along the Pennsylvania siding.

**The Western Pennsylvania Division of the National Safety Council** is arranging a safety instruction course, for superintendents, foremen and other mine officials consisting of a series of talks and discussions at evening meetings to be held in Uniontown during the spring. The dates of the meetings and the topics to be handled are as follows: Feb. 23—Organized accident prevention and what it has accomplished. March 9—Labor turnover and its relation to accident prevention. March 23—First Aid, and how to stimulate interest. April 6—Mine foreman's and superintendent's responsibility for accident prevention and its relation to production. April 20—Electrical hazards as applied to mining. May 4—Transportation hazards as applied to mining. May 18—Face hazards and their prevention. June 1—Closing meeting with banquet. The principal speaker at the first meeting will be C. G. Rice, of Pittsburgh, President of the Western Pennsylvania Division of the National Safety Council. The other speakers have not yet been announced.

A verdict was returned by a jury in the court at Ebensburg, Cambria County, in the case in which Samuel S. Hoffman brought an action in trespass against the Berwind-White Coal Mining Co., for \$7,000. This case was tried in the Cambria County court several years ago, and Hoffman was awarded \$14,000. This was appealed to the state supreme court, and a new trial was granted on the grounds that improper testimony had been introduced and an error had been made in the court's charge to the jury.

**The Schuylkill Valley Coal Co.** has succeeded the Port Carbon Coal Co., of Pottsville, taking over all of its assets and liabilities. The business will be conducted under the new name; and any obligations of the Port Carbon Coal Co. will be met by the Schuylkill Valley Coal Co.

According to the annual report of Mine Inspector David T. Williams, of the Sixth Anthracite District, 3,605,100 tons of coal were mined during 1920. Sixteen fatal and sixty non-fatal accidents were recorded during the year. The tonnage produced by the various companies in the district was as follows:

Pennsylvania Coal Company	1,267,847
Delaware, Lackawanna & Western Railroad Company	792,947
Hudson Coal Company	713,461
Scranton Coal Company	266,582
Mt. Jessup Coal Company, Ltd.	164,047
Quinn Coal Company	119,837
Spencer Coal Company	62,292
Nay Aug Coal Company	60,671
Bald Mountain Coal Company	50,371
Carney & Brown Coal Company	30,671
John J. Boland Coal Company	8,333
Scranton Anthracite Coal Company	7,541
Total	3,605,100

Production in the central Pennsylvania field fell off 1,660,000 tons during the month of January, as compared with Dec. 1920, according to figures compiled by the Central Pennsylvania Coal Producer's Association. Total production for the month was 3,753,533 tons. In December the production was 5,413,829 tons. Operators express the belief that the lowest ebb has been reached and that the demand for coal will be very much larger in the near future.

A new company which is to be known as the Fort Hill Coal Co. has been capitalized at Johnstown, for \$500,000, under the laws of Delaware, the incorporators being Carl G. Heinz, Adam Trabold and W. H. Morgan, all of Johnstown. A deal was recently closed for the purchase of 1,500 acres of valuable coal land in Somerset County, located in the vicinity of Fort Hill and engineers at work say the coal appears as good as any ever developed in Somerset County. Shipping facilities are exceptionally good as the mines will be located along the main line of the Baltimore & Ohio. All of the coal purchased is of the C and D veins.

#### UTAH

State Mine Inspector C. A. Allen, who has just completed an inspection of the mines of the United States Fuel Co. at Hiawatha, reports that with few exceptions the properties are well equipped to observe the "Safety First" principles laid down by state authorities. According to Inspector Allen, this is the first of a series of inspections that will include the entire state.

The Blue Seal Coal mine has been opened at Scofield. The property is expected to

have an ultimate capacity of from 800 to 1,000 tons a day. Belmont McGee of Denver is the operator.

Mining operations are to be resumed at Sunnyside Mine No. 2, the property of the Utah Fuel Co., in Carbon County. This mine has been the scene for several months of one of the most disastrous fires in the history of mining in this state. The fire started in August. It is still burning in certain sections of the mine, but these are to be blocked off and operations resumed in those portions now workable.

The Knight interests are making preliminary surveys of the proposed railroad to connect the town of Salina with the Salt Lake Route, at Juab. If built the road will connect up with the valuable coal holdings on Red Creek, and there may possibly be a few branches to other mines that are expected to be opened on the East slope of the range. It is stated that construction of the road will begin as soon as the weather permits.

#### VIRGINIA

**The Red Ash Fuel Sales Corporation**, recently incorporated, is planning for the development of about 1,200 acres of coal lands near Raven. Two mines will be opened and operated, providing a total daily output of about 400 tons. Machinery will be installed at an early date.

#### WASHINGTON

Installation of machinery in the Centralia Briquetting Co.'s. plant, north of Centralia, was recently completed and the plant was given a trial run. Coal will be sent through and the plant will soon be manufacturing briquettes to its full capacity.

The year 1920 will be remembered as the banner coal mining year in the Roslyn-Cle Elum coal fields, the total output having reached figures never heretofore attained here. The total output in tons reached 1,917,311.

#### WEST VIRGINIA

**The Ursula Coal Co.** has been sold to F. L. Marsh and W. T. Hopke, the latter having been in the employ of the B. & O. for a number of years. Messrs. Marsh and Hopke will conduct their business as a partnership.

One of the larger coal companies formed during the early part of February for the development of smokeless coal territory was the Tug River Smokeless Coal Co. of Welch, which will operate in McDowell County. It has a capital stock of \$550,000. A branch office of the company will be maintained in Chicago. Leading figures in the new company are Thomas A. Lowery, Nelson A. Reinert, Claude Sachs, Perry S. Patterson, Dwight P. Greene, Chicago, Ill.

In connection with the expenditure of \$250,000 in the construction of a mining plant near Barrackville, the Chesapeake Coal Co. has perfected plans for the erection of 200 miners' dwellings as a part of a model mining town.

Following the preliminary organization of the Triple Pocahontas Coal Co. with a capital stock of \$125,000, officers have been elected as follows: W. C. Neikirk, Davy, president; Charles R. Woolwine, Jr., Davy, vice-president; Leo J. Sigmaigo, secretary-treasurer and general manager. A total of 334 acres of land on Dry Fork in McDowell County not far from Iaeger are to be developed.

It is considered probable that the number of district mining inspectors on the force of the West Virginia Department of Mines will be increased from 19 to 22, a bill to make that possible having been introduced in the Senate. Until 1919 there were only 15 district mine inspectors. There had been such a tremendous growth in the number of mines that it was then necessary to increase the number to 19. Should the bill become a law it would necessitate a redistricting of the state and reappointment of all present inspectors for the period of the unexpired term ending Dec. 31, 1921. After Dec. 31 appointments of inspectors will be for a term of four years.

Pennsylvania people are principally interested in the Fulton Gas Coal Co. which plans to undertake the development of coal land in Clark district of Harrison County, being capitalized at \$400,000.

## Personals

**R. E. Eggebrecht**, for the past three or four years sales manager of the Southern Coal, Coke & Mining Co. of St. Louis, resigned on Feb. 1, to accept the general sales agency for the two mines at Marissa of the Egyptian Coal & Mining Co. with offices in the Boatmen's Bk. Bldg., St. Louis. He is succeeded by **Robert H. May** of Chicago, who has for many years been connected with the Coal Traffic Department of the Burlington R.R.

**John E. Shaw**, one of the oldest coal men in years of service in St. Louis, has recently resigned from his connection with John T. Hesser & Co. and retired from business, settling down on a plantation at Citronville, Ala.

**H. W. Salmon**, who has been in the coal business in St. Louis for the past two or three years in a jobbing way, has resigned and accepted a position with the Missouri Pacific R.R. as acting fuel agent, succeeding **W. P. Hawkins**, president of the Western Coal & Mining Co.

**T. C. Hughes**, president Kentucky Collieries, Pineville, was a recent visitor in New York City negotiating the disposition of his tonnage on the overseas market.

**P. F. Merritt**, formerly with the coal purchasing department of the central region of the Pennsylvania has been appointed vice-president of the Eastern Fuel Co., with headquarters in Pittsburgh.

According to word received in Fairmont, **W. C. MacQuown**, who has been the sales manager for the A. R. Hamilton Co., Pittsburgh, and business manager of the *Coal Trade Bulletin*, has resigned to become president and sales manager of the Keister-MacQuown Fuel Co., Inc.

**W. S. Wood**, identified with several large companies in the Kanawha and New River fields, having his headquarters at Charleston attended the banquet of the Logan Operators Association at Huntington on Feb. 3.

**R. J. Stegall**, auditor for the Geo. M. Jones interests with headquarters at Amherstdale was a recent visitor at Huntington, W. Va.

**W. T. Jones**, general superintendent of the Main Island Creek Coal Co. at Omar, W. Va. was a visitor in February at Huntington.

**R. L. Wildermuth**, interested in coal companies operating in both Ohio and Logan County, W. Va. was a visitor in Huntington early in February.

**Garner Fletcher**, of Huntington, manager of the Elkhorn-Piney Co. was in the Gulf region of West Virginia on business during the first week of February.

**T. L. Lewis**, secretary of the New River Operators' Association, with headquarters at Charleston, attended the banquet of the Logan Operators' Association at Huntington on the night of Feb. 3.

**Clark Dobble**, general superintendent of the Jamison Coal & Coke Co.'s West Virginia operations and **J. D. Victor**, general inspector of mines of the company, were in Pittsburgh on business during the first week of February.

A visitor in Pittsburgh early in February was **Guy Hartley** of the Winfield Coal Co., with headquarters at Fairmont.

**R. F. Bopes**, connected with Coale & Co. of New York was in Charleston, W. Va. during the early part of February organizing the New River, Raleigh & Pocahontas Coal Co.

The Morgantown Coal Co. was represented in Pittsburgh during the early part of February by **M. L. Taylor** and **Harry C. Owen**, of Morgantown.

**W. J. Manley**, traffic manager of the Logan Operators' Association with headquarters at Huntington, was a visitor in Washington, D. C., during the early part of February.

**Thomas W. Arnell**, of Fairmont, president of the Antler Coal Co., has returned from a month's sojourn at Hot Springs, Ark.

**John Meyers**, formerly mine manager of the Security mine at Duquoin, Ill., of Chicago, and who has served in many capacities with various coal concerns throughout the southern end of the state, has accepted a position as mine manager for the Majestic mine, a large plant controlled by the Equitable Coal & Coke Co., of Chicago.

**R. A. Harmon**, who has for the past months been connected with the Sterling-

Midland Coal Co., Chicago, has joined the forces of the Wolverine Coal & Mining Co., also of Chicago.

**Colonel H. C. Rizer**, the genial chief clerk of the U. S. Geological Survey, was the guest of honor at a lunch given by all his associates on Jan. 15 to celebrate his completion of thirty-five years of service with the survey.

## Association Activities

### Northeast Kentucky Coal Association

New officers were elected by the association at the annual meeting held at Ashland. Fully forty companies were represented, the attendance eclipsing that of any previous annual meeting. The meeting itself was preceded by a banquet. Following the banquet, President Charles W. Connor called the general meeting to order. After important business matters had been taken up and acted upon, new officers and three new members of the executive committee were chosen.

On the roster of new officers are the following: Cadwalader Jones, vice-president of the Big Elkhorn Coal Co., of Betsy Lane, Ky., president; C. W. Connor, general manager of the Elkhorn & Shelby Creek Coal Co., Esco, Ky., first vice-president; E. R. Price, manager of the Consolidation Coal Co., Van Lear, Ky., second vice-president; George B. Archer, general manager Middle Creek Coal Co., Prestonsburg, Ky., treasurer.

Elected as members of the new executive committee were: J. G. Smyth, manager of the Consolidation Coal Co., Jenkins, Ky.; T. S. Haymond, vice-president and general manager Elkhorn Coal Corporation, Fleming, Ky.; Henry LaViers, Paintsville, Ky.

### Morgantown Coal Club

Coal men of Morgantown have ushered into existence what will be known as the Morgantown Coal Club. The movement to form such a club was engineered by those who felt the necessity of having an organization which would hold meetings regularly for an exchange of views and in order to insure more co-operation among operators. At the first meeting held, Marvin Taylor of the Morgantown Coal Co. acted as chairman, R. R. McFall of the Southern Fuel Co. being the secretary. A committee on organization and bylaws was named, consisting of the following members: C. M. Lyons, Fuel Corporation of America; R. M. Davis, Davis Coal Co.; C. E. Watson, Watson Coal Co.; C. E. Gadd, Gadd-Shaw Fuel Co.; G. L. Rodgers, Mon-Scott Fuel Co.

Companies having representation at the first meeting were: Citizens Fuel Co., Fiedler-Davis Coal Co., Mon-Scott Fuel Co., Morgantown Coal Co., Southern Fuel Co., Fuel Corporation of America, Davis Coal Co., C. E. Watson Coal Co., Commercial Fuel Co., Gadd-Shaw Fuel Co. and W. A. Marshall & Co.

## Traffic News

The Kanawha Operators' Association has been engaged in an effort to equalize the rates between the Kanawha field and Cincinnati and although a decision has been handed down by the I. C. C. it is rather indefinite as to just what points the decision applies. At the present time a differential of 35c. a ton exists on Kanawha coal destined for Cincinnati as all coal consigned to the point named must cross the L. & N. bridge at Cincinnati. The L. & N. has applied for an increase in rates on coal shipped from mines on its lines to points in Central territory but so far it has not been learned as to just how the L. & N. has construed the decision of the commission. Unless the differential is eliminated it will keep Kanawha coal out of Cincinnati and certain Indiana markets.

Attorneys and representatives of the Kanawha, New River and Winding Gulf Operators' Association closed their arguments late in the first week of February against the proposed increase in rates of the Virginian Power Co., amounting to 45 per cent and which if granted would amount to an increase of 100 per cent over the original rates.

In a complaint to the I. C. C. the Manufacturers' Association of Connecticut, Inc., attacks unreasonable coal rates between points in Connecticut and from points in Rhode Island to points in Connecticut between June 24, 1918, and Oct. 21, 1918.

The Mississippi Valley Iron Co. of St. Louis attacks as unreasonable rates on coke from Minneapolis to St. Louis.

The Midland Coal Co., of Williams, Okla., attacks as unreasonable rates on coal from Williams to Kansas City, Mo.

The Fairmont & Cleveland Coal Co., of Fairmont, attacks as unreasonable rates on coal from Hood Mine, W. Va., to destinations in New York and New Jersey by reason of additional charges assessed by the New York Transit Co.

The principal argument advanced by the Monongahela Ry. against dividing any part of the increase in coal freight rates received last August with the Morgantown & Wheeling Ry., a short line coal carrying road operating on Scotts Run, in a hearing before a representative of the commission at Morgantown early in February, was that the M. & W. Ry. was receiving a just proportion of the rate based on the value of the property of the short-line road. Rebutting the argument, the M. & W. claims that the value of its property does not enter into the question, the question to be decided being whether or not the road should receive any part of the general increase granted roads in general by the commission.

The I. C. C. has assigned for hearing March 16 at Birmingham, Ala., the complaint of the Corona Coal Co. vs. the War Department Inland Waterways, Mississippi Warrior Service.

In the case of the Omaha Chamber of Commerce, a tentative report of an I. C. C. examiner recommends that the reconsignment rules and charges on coal and coke in territory west of the Mississippi River are not unreasonable.

The Public Service Commission of Nevada has complained to the commission against unreasonable rates on coal from Wyoming and Utah points to Nevada points.

In the complaint of the Keeler Lumber & Fuel Co. the I. C. C. decides that the rate on coal from Nokomis, Ill., to Shipler, Wis. is unreasonable.

In the complaint of the Nason Coal Co., the commission holds that the rate on bituminous coal from Nokomis, Ill., to Union Grove, Wis., is unreasonable.

It furtherance of its plans for expansion in the coal districts of West Virginia and Kentucky the Norfolk & Western R.R. has taken over the Tug River and Kentucky Railroad of 4.45 miles at \$53,745 and the Williamson and Pond Creek Railroad Co. of 16.29 miles at \$71,994.

The fleet of the Connecticut Transportation Co., coal carriers, has been bought by the James McWilliams Blue Line Transportation Co. of New York. The fleet comprises one large tug valued at \$100,000 and seventeen barges valued at \$500,000.

## Coming Meetings

New York State Coal Merchants Association's third annual group meeting will be held at the Pennsylvania Hotel, New York City, March 3. Recording Secretary, F. Davey, Amsterdam, N. Y.

New England Coal Dealers Association will hold its annual meeting March 23 and 24 at Boston, Mass. President, W. A. Clark, Boston, Mass.

The American Society of Mechanical Engineers will hold its spring meeting May 23, 24, 25 and 26 at the Congress Hotel, Chicago, Ill. Secretary, Calvin W. Rice, 29 West 39th St., New York City.

Northwestern Pennsylvania Coal Operators' Association will hold its annual meeting Tuesday, March 1, at the Old Colony Club, Pittsburgh, Pa. Secretary, T. E. Diefenderfer, Butler, Pa.

The Rocky Mountain Coal Mining Institute will hold its annual winter meeting Feb. 25 and 26 at the Albany Hotel, Denver, Col. Secretary, F. W. Whiteside, 307 Ernest & Crammer Building, Denver.

National Chamber of Commerce will hold its ninth annual meeting at Atlantic City, N. J., April 27, 28 and 29.

Canadian Institute of Mining and Metallurgy will hold its annual meeting March 2, 3 and 4, 1921, at Windsor Hotel, Montreal, Quebec, Canada. Secretary-Treasurer, G. C. Mackenzie, Montreal, Quebec, Canada.